The Economic Development of
MEXICO

Report of

THE COMBINED MEXICAN

WORKING PARTY

1953

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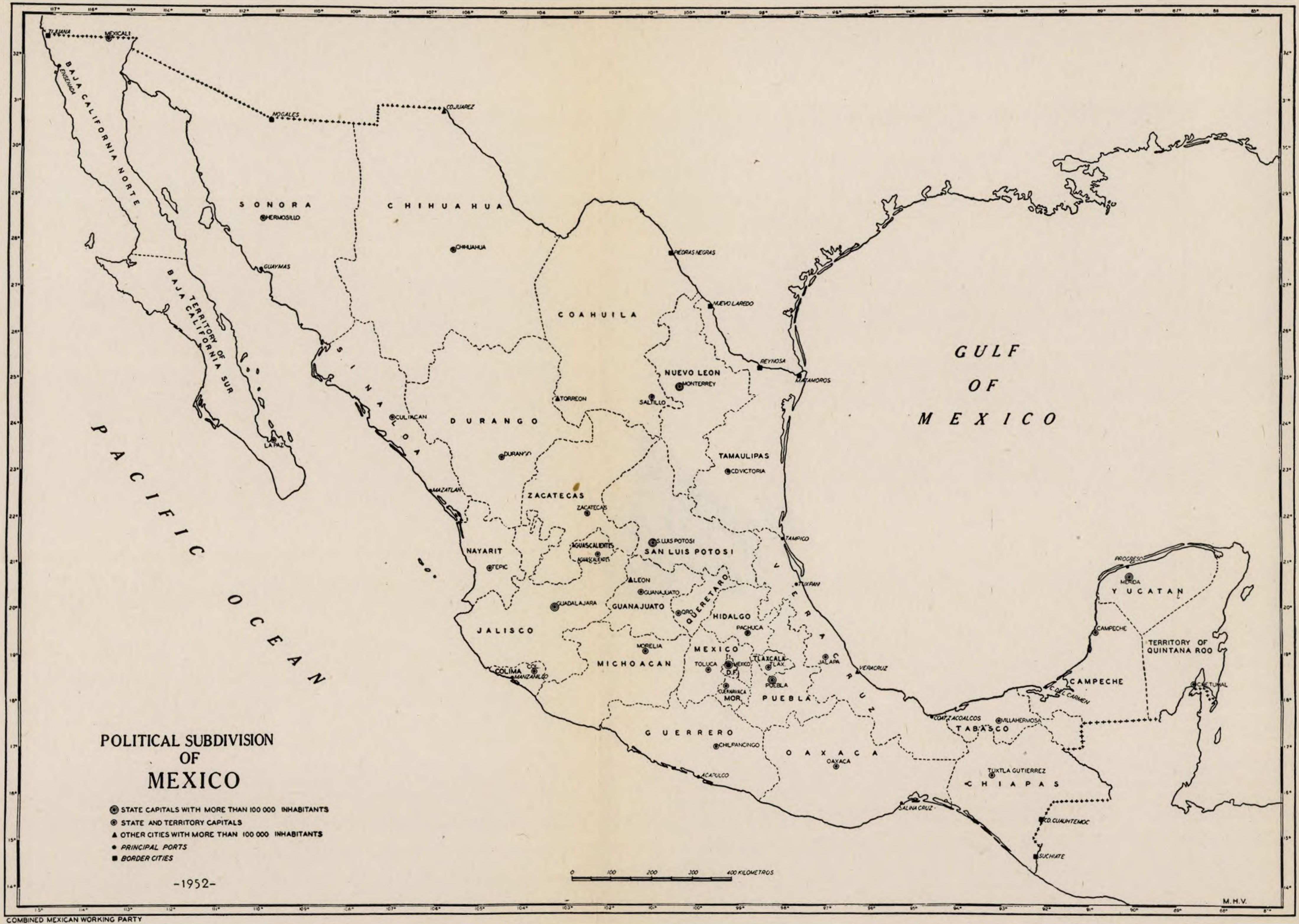
The Economic Development of Mexico



POLITICAL SUBDIVISION OF MEXICO

- ⊛ STATE CAPITALS WITH MORE THAN 100 000 INHABITANTS
- ◉ STATE AND TERRITORY CAPITALS
- ▲ OTHER CITIES WITH MORE THAN 100 000 INHABITANTS
- • *PRINCIPAL PORTS*
- ■ *BORDER CITIES*

-1952-

GULF OF MEXICO
PACIFIC OCEAN
BAJA CALIFORNIA NORTE
TERRITORY OF BAJA CALIFORNIA SUR
SONORA
CHIHUAHUA
COAHUILA
NUEVO LEON
TAMAULIPAS
SINALOA
DURANGO
ZACATECAS
NAYARIT
AGUASCALIENTES
SAN LUIS POTOSI
JALISCO
GUANAJUATO
QUERETARO
HIDALGO
VERACRUZ
MEXICO
D.F.
TLAXCALA
MOR.
PUEBLA
MICHOACAN
COLIMA
GUERRERO
OAXACA
TABASCO
CHIAPAS
CAMPECHE
YUCATAN
TERRITORY OF QUINTANA ROO
TIJUANA
MEXICALI
ENSENADA
NOGALES
C.D. JUAREZ
HERMOSILLO
GUAYMAS
CHIHUAHUA
PIEDRAS NEGRAS
NUEVO LAREDO
REYNOSA
MATAMOROS
MONTERREY
SALTILLO
TORREON
CULIACAN
LA PAZ
DURANGO
MAZATLAN
CD. VICTORIA
ZACATECAS
TAMPICO
S. LUIS POTOSI
AGUASCALIENTES
TEPIC
LEON
GUANAJUATO
TUXPAN
GUADALAJARA
QRO.
PACHUCA
MORELIA
TOLUCA
MEXICO
TLAX.
JALAPA
VERACRUZ
COL.
MANZANILLO
CUERNAVACA
PUEBLA
CHILPANCINGO
ACAPULCO
OAXACA
COATZACOALCOS
VILLAHERMOSA
TUXTLA GUTIERREZ
SALINA CRUZ
CD. CUAUHTEMOC
SUCHIATE
C. DEL CARMEN
CAMPECHE
PROGRESO
MERIDA
CHETUMAL
0 100 200 300 400 KILOMETROS
M. H. V.

COMBINED MEXICAN WORKING PARTY

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666062

Direct 5-21-53 50.

October 17, 1952

The Honorable Eugene R. Black, President
International Bank for Reconstruction and Development
Washington, D. C.
and
Licenciado Antonio Carrillo Flores, Director General
Nacional Financiera
Mexico, D. F.

Gentlemen:

We are pleased to submit to you the report prepared by the Combined Mexican Working Party on the long-term trends in the Mexican economy, with special reference to Mexico's capacity to absorb additional foreign investments. This report is the fruit of collaboration between Mexican and Bank economists over a period of more than one year.

In arriving at the conclusions to the report we were able to draw lessons from the history of investment in Mexico which should prove useful guidance for the future. We believe the report supplies the essential foundations needed by the Mexican Government to formulate a development program.

Many official agencies and ministries are now concerned with particular aspects of economic development, but there is no one organization in the Mexican Government with the staff or experience to produce a program for the country's overall development. We therefore recommend that the Government constitute an autonomous group of technicians with authority to carry forward the work begun in the present report. While its first task would be to recommend to the Government steps to be taken to give effect to the conclusions of this report, it would be empowered, with the aid of its own staff or the staffs of other Government agencies, to make further studies, to formulate investment programs, and to assist in the integration of the Government's development activities within the framework of a development program approved by the President of the Republic.

The data included in this report came from many sources, but the way they are presented and the conclusions drawn are the exclusive responsibility of the members of the Combined Mexican Working Party. We should like to express our appreciation to the many Mexican Government ministries and other public and private agencies for the information they furnished and for the unfailing cooperation we received from the staffs of both the Nacional Financiera and the International Bank, without which it would not have been possible to prepare this report in its present form. We are indebted in particular to Nacional Financiera's Department of Financial Studies for making staff and facilities available to the members of the Working Party. We also wish to express thanks to the Bank of Mexico for making available important unpublished data, especially in the Bank's Department of Economic Studies.

It is our sincere hope that this report may be of value in promoting the economic development of Mexico.

RAUL ORTIZ MENA
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JONAS H. HARALZ

Foreword

In February 1951, Nacional Financiera proposed that the Mexican authorities and the International Bank for Reconstruction and Development set up a combined working party to assess the major long-term trends in the Mexican economy with particular reference to Mexico's capacity to absorb additional foreign investments. The conclusions of the Combined Mexican Working Party were not to be regarded as committing either the Mexican Government or the International Bank on matters of policy. The International Bank welcomed this proposal, and the first meeting of the Working Party, consisting of two Mexican and two Bank economists, took place in Washington in April 1951, when its terms of reference and program of studies were agreed upon. Subsequent meetings took place in Mexico, where most of its work was done, and in Washington.

The Combined Mexican Working Party interpreted its task as falling into two main parts: (1) a review of the course and effects of investment in Mexico from 1939 to 1950, and (2) an assessment of the prospects for the national income and the balance of payments over a period of approximately ten years. Estimates of what will happen in the immediate or the distant future therefore play little part in the report.

The report opens with a broad survey of the magnitude and composition of investment in Mexico from 1939 to 1950 and the methods used to finance investment between those years. The growth of the national income (including consumption and savings) is also discussed and an evaluation is made of national income and investment prospects. In this first chapter, generalizations are advanced which are based on the more detailed analyses in the succeeding seven chapters on the development of investment and output for agriculture (including livestock, forestry and fisheries), mining, petroleum, electric power, industry and transportation and communications. In each case, an assessment is also made of the outlook for further development of investment and production. Because of the importance of expenditures on education, public health and welfare in relation to economic development, an attempt has been made in Chapter VIII to outline the effect of investments in these fields, although limitations in the data prevented thorough analysis. The chapter on public finance which follows stresses the role of government revenue and spending on economic development. Chapter X summarizes the recent history of the Mexican balance of payments and, through the medium of a hypothetical balance of payments for 1956, makes an effort to gauge the prospects of the balance of payments over the next decade. The final chapter sets forth the conclusions based on the foregoing analyses.

Besides the text, the report includes 153 tables and 5 appendices. The tables are based on information available in February 1952, and contain a wealth of data on Mexico's economic development, mainly from 1939 to 1950. A considerable part of the information could not be adequately treated in the text, and the tables are included for the use of those who wish to go more fully into points mentioned in the report. Much of the data on national income, gross national product, public and private investment, production and consumption, external debt and the balance of payments are new and appear for the first time in this report. The Working Party hopes that the Mexican Government will find it possible to continue the series of data started in this report.

In most fields, the official statistics are incomplete or inaccurate, or both, and in some instances discrepancies in a single field have proved baffling. For example, no fewer than three official bodies issue foreign trade statistics which pass as authoritative. In fact, none of these three sets of data gives an accurate account of Mexico's foreign trade, and it is unusual for the figures issued by the three institutions to agree. There is a real need in Mexico to improve official statistics and to integrate the activities of the agencies engaged in collecting or regrouping statistics. Much time was spent by the Working Party attempting, not always successfully, to check and to improve the official data. Despite these difficulties, however, the Working Party believes that it has not called upon the statistical foundations of the report to support a heavier burden of conclusions than they can bear.

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The Economic Development of Mexico

CHAPTER I

The National Income

A. Growth of National Income

Greater productive capacity and increased use of capital equipment accumulated over a long period of time prior to 1939 produced a notable rise in Mexico's national income from 1939 to 1950. The Combined Mexican Working Party estimates that the real net domestic product more than doubled over these years and that on the average the annual increase exceeded 7% (Tables 5 and 6, Chart 1).[1] Output increased in almost every sector of the economy (Table 6): between 8 and 11% in commercial and other services, industry and fisheries; from 5 to 7% in transportation and communications, agriculture, electric power, petroleum and government services. More moderate increases occurred in building and construction and in cattle raising, and mining was the only field in which production declined.

Unused capacity at the outbreak of the war permitted the production of manufactures and industrial metals to expand rapidly in response to war-time demand. Towards the end of the war, when some industrial equipment could again be obtained in the United States, a further rise in output was achieved through increases in capacity. Throughout the war, capital equipment in railroads, power plants and communications was made to carry heavier loads than before without much new investment, although often with reduced efficiency. Industrial expansion and a great increase in private investment towards the end of the war established the basis for a big rise in commercial and other private and public services. The increases in industrial output, and in transportation, commercial and other services in 1940-1945 were achieved with relatively small capital outlays. On the other hand, the near stoppage of investment in the petroleum and electric power industries limited output in these fields. Agricultural production also increased only slightly, since little investment was made in land clearing, small-scale irrigation and agricultural machinery, and investments in large-scale irrigation during the war did not yield appreciable results until later.

In the postwar period 1946-1950, output continued to increase, but more slowly. Growth was slowest in those fields where advance had previously been most rapid, i.e., industry, commercial and other services, and building and construction. On the other hand, there was a more rapid expansion in agriculture, petroleum, electric power, transportation, communications and cattle raising. However, these increases

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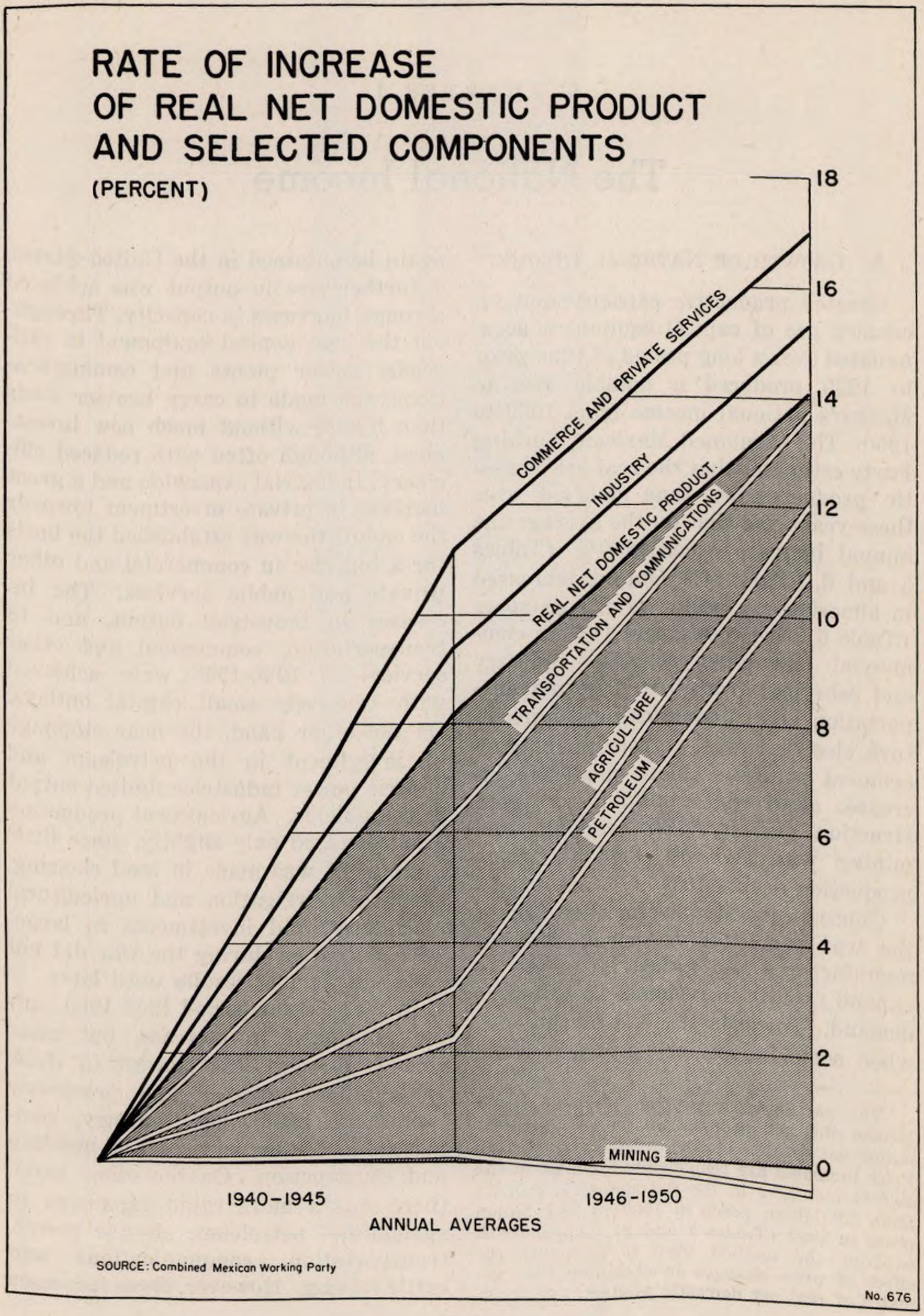
[1] The net domestic product is the national income plus net income transferred abroad or minus net foreign income received by Mexico. Price increases are responsible for most of the sixfold increases in the net domestic product from 5.8 billion pesos in 1939 to 38.1 billion pesos in 1950 (Tables 1 and 2). Appendix A explains the method used to eliminate the effect of price changes in obtaining the estimates of real net domestic product.

CHART 1



RATE OF INCREASE OF REAL NET DOMESTIC PRODUCT AND SELECTED COMPONENTS

(PERCENT)

SOURCE: Combined Mexican Working Party

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did not compensate for the reductions in other fields, and the rate of growth of real net domestic product declined from 8.2% in 1940-1945 to 5.9% in 1946-1950 (Table 6, Chart 1).

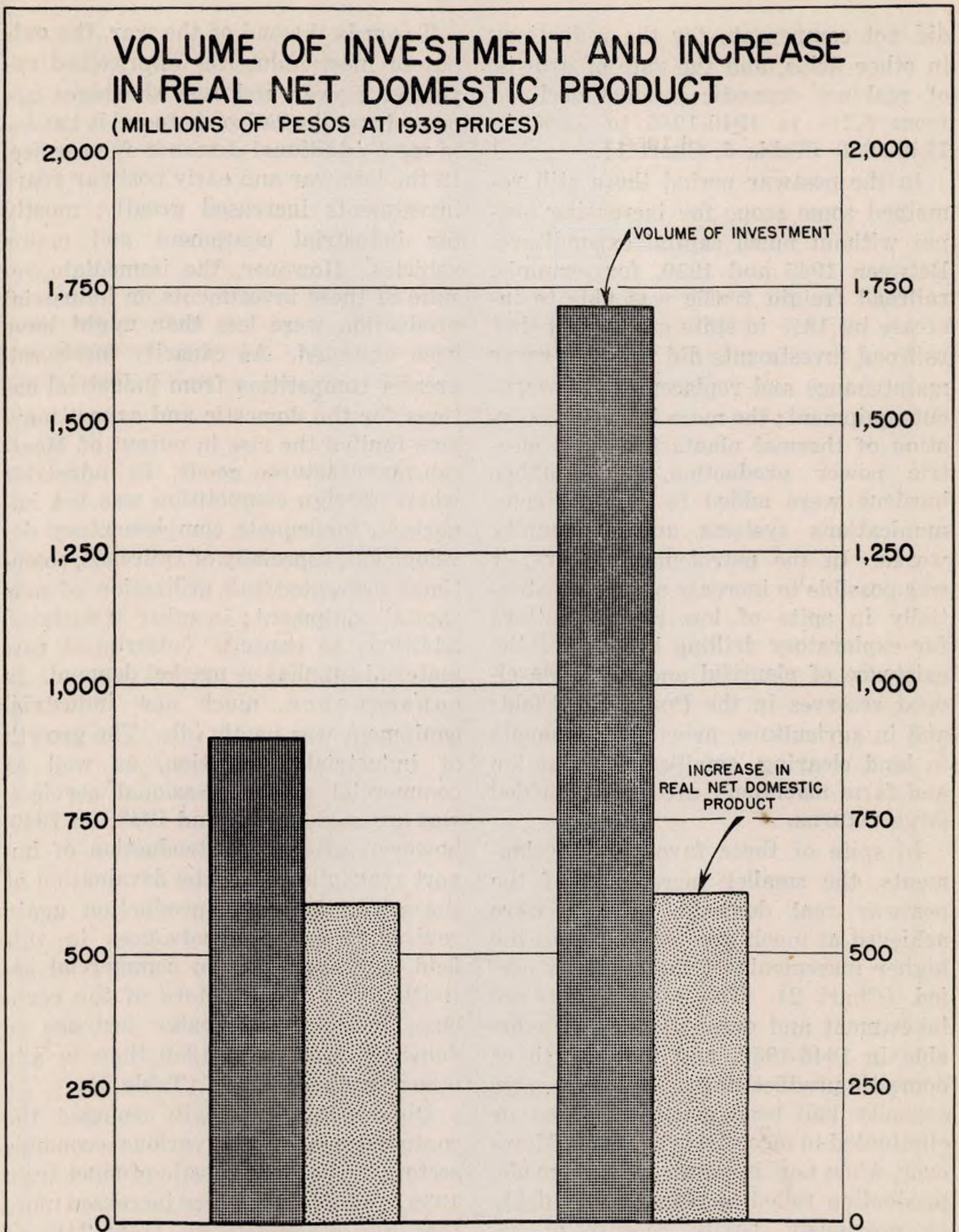
In the postwar period there still remained some scope for increasing output without much capital expenditure. Between 1945 and 1950, for example, railroad freight traffic was able to increase by 18% in spite of the fact that railroad investments did not even cover maintenance and replacement of worn-out equipment; the more intensive operation of thermal plants increased electric power production, and further burdens were added to existing communications systems and community works. In the petroleum industry, it was possible to increase output substantially in spite of low capital outlays for exploratory drilling because of the existence of plentiful and easily developed reserves in the Poza Rica Field; and in agriculture, private investments in land clearing, small-scale irrigation and farm machinery after 1947 yielded large returns.

In spite of these favorable developments, the smaller increments of the postwar real domestic product were achieved at much greater cost than the higher increments of the previous period (Chart 2). The relation between investment and output was less favorable in 1946-1950, and the growth of domestic product slower, because excess capacity had been greatly reduced or eliminated in most fields by 1946. Moreover, when new investments were made, production failed to respond as quickly as previously, partly because of renewed competition from industrial countries and partly because public facilities and auxiliary industries lacked capacity to expand output.

Towards the end of the war, the output of most industries approached capacity. Power and fuel shortages appeared and the railroads found it harder to meet additional demands for service. In the late war and early postwar years investments increased greatly, mostly for industrial equipment and motor vehicles. However, the immediate results of these investments on industrial production were less than might have been expected. As capacity increased, greater competition from industrial nations for the domestic and export markets limited the rise in output of Mexican manufactured goods. In industries where foreign competition was not important, inadequate complementary development, especially of railroads, sometimes prevented full utilization of new capital equipment; in other industries, additions to capacity outstripped raw material supplies or market demand. In consequence, much new industrial equipment was partly idle. The growth of industrial production, as well as commercial and professional services, was arrested in 1947 and 1948. In 1949, however, after the introduction of import restrictions and the devaluation of the peso, industrial production again revived. Continued advances in this field, and expansion in commercial activities and other sectors of the economy, produced a greater increase in domestic product in 1950 than in any other year since 1942 (Table 5).

Differences in growth changed the contributions of the various economic sectors in the net domestic product from 1939 to 1950. Commerce increased more than any other activity, from 24% of the total in 1939 to 31% in 1950. Industry's contribution also increased from 16% to 18%, while agriculture increased only from 13% to 14%. On

CHART 2



VOLUME OF INVESTMENT AND INCREASE IN REAL NET DOMESTIC PRODUCT

(MILLIONS OF PESOS AT 1939 PRICES)

SOURCE: Combined Mexican Working Party.

the other hand, the proportion contributed by government and private services, transportation and communications, mining and cattle raising declined (Tables 2 and 3).

Detailed census data for 1950 on changes in occupational distribution of the working population are not yet available. On the basis of fragmentary information, however, it can be estimated that the proportion of the economically active population engaged in agriculture, cattle raising, forestry, fisheries, mining and petroleum declined from 67% of the total in 1940 to 61% in 1950. At the same time, the proportion of the economically active population engaged in industry, commerce, transportation and public and private services increased from 33% to 39%.

The growing importance of commerce, distribution and industry is the salient feature of the expansion of national income in the 1939-1950 period. In these years, economic development intensified the commercialization of an essentially subsistence economy. Highway construction, electrification, irrigation and industrialization stimulated the movement of people from the poorer rural sections to the newer and improved farming areas and urban centers. With the development of the economy, commerce became more important and offered prospects of high earnings. These prospects were made even more favorable by inflation, which increased the chances of speculative profits.

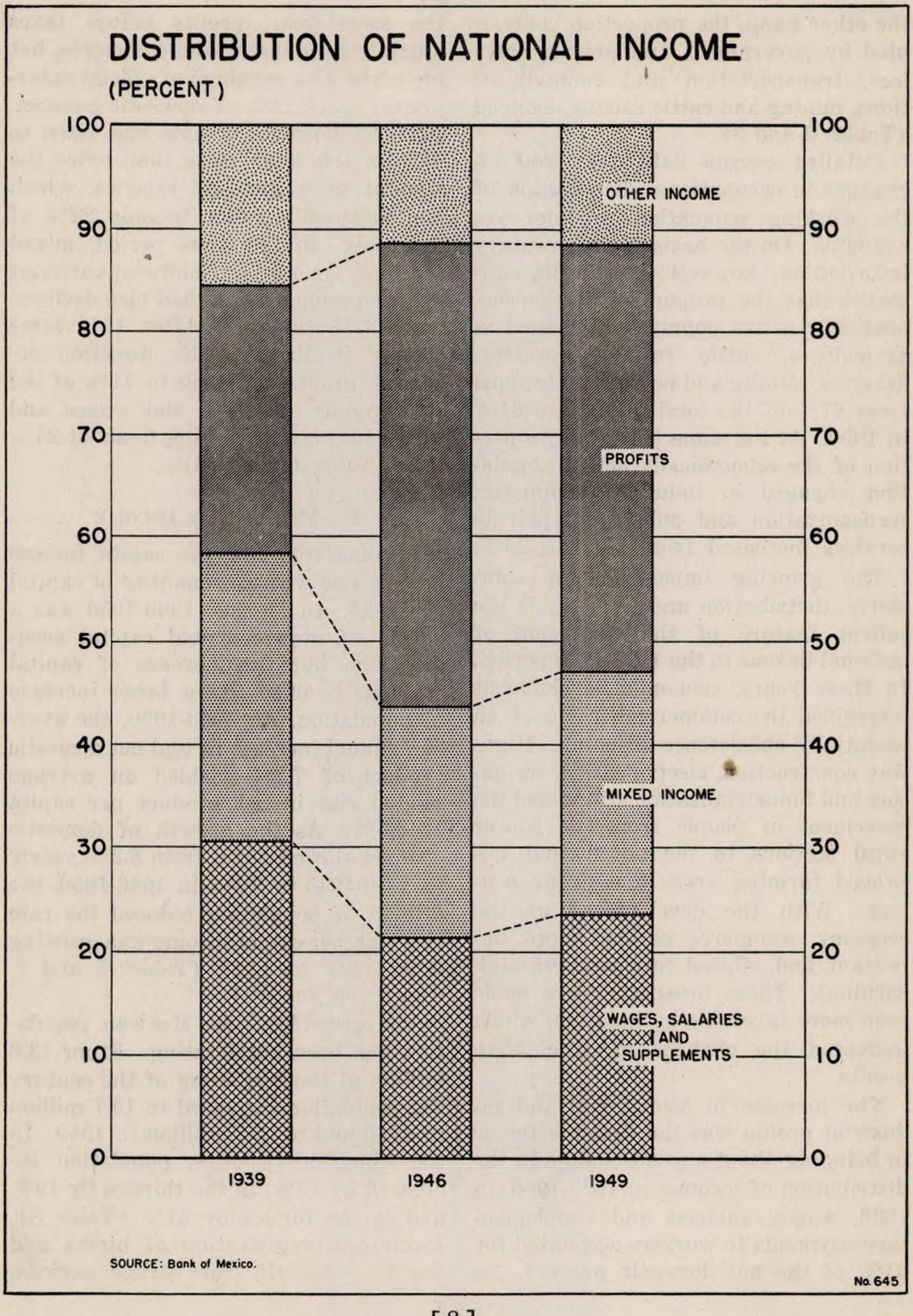
The increase in commercial and industrial profits was the decisive factor in bringing about a great change in the distribution of incomes in 1939-1950. In 1939, wages, salaries and supplementary payments to workers accounted for 31% of the net domestic product. In the same year, profits before taxes (mainly in industry and commerce, but including also earnings of official enterprises) were 26% of domestic product. In 1946, however, profits had risen to 45% of the total, more than twice the amount of wages and salaries, which had meanwhile fallen to only 22% of the total. In the same period, mixed incomes (mostly agricultural earnings but also some profits) had also declined from 28% to 22%. After 1946 some change in the opposite direction occurred, profits declining to 41% of the net product in 1949, and wages and mixed incomes increasing to about 24% each (Table 4, Chart 3).

B. Per Capita Income

Productivity and per capita income tend to rise with the quantity of capital per head. In Mexico, 1939-1950 was a period of unprecedented capital accumulation, but the increase of capital was partly offset by a large increase in population. In 1940-1950, the average annual increase in real net domestic product of 7.2% yielded an average annual rise in net product per capita of 4.5%. As the growth of domestic product slowed down from 8.2% yearly in 1940-1945 to 5.9% in 1946-1950, the growth of population reduced the rate at which per capita income was growing from 5.9% to 2.9% (Tables 6 and 7, Charts 4A and 4B).

The growth of the Mexican population has been accelerating. From 13.6 million at the beginning of the century the population increased to 19.7 million in 1940 and to 25.7 million in 1950. In the nineteen twenties, population increased by 15%, in the thirties by 19% and in the forties by 31% (Table 8). Incomplete registration of births and deaths, especially for earlier periods,

CHART 3

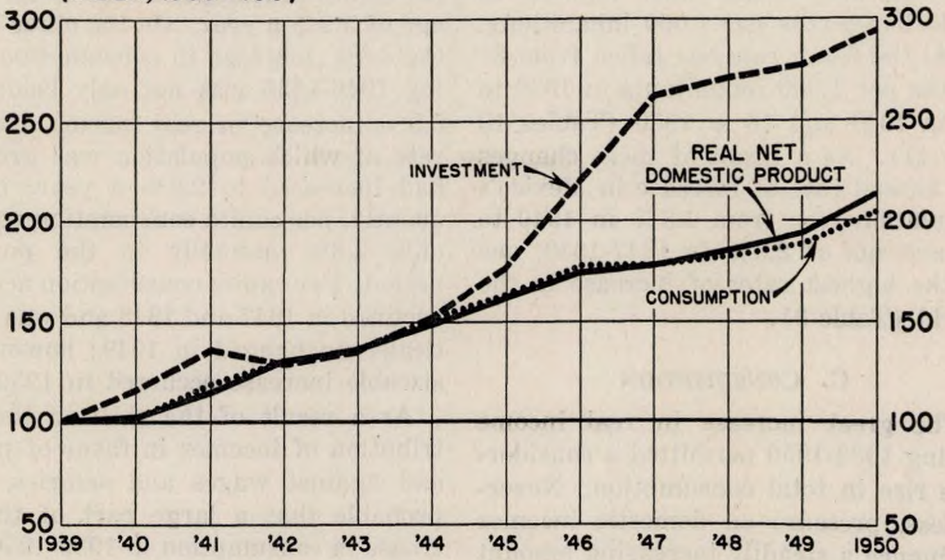


SOURCE: Bank of Mexico.

CHART 4

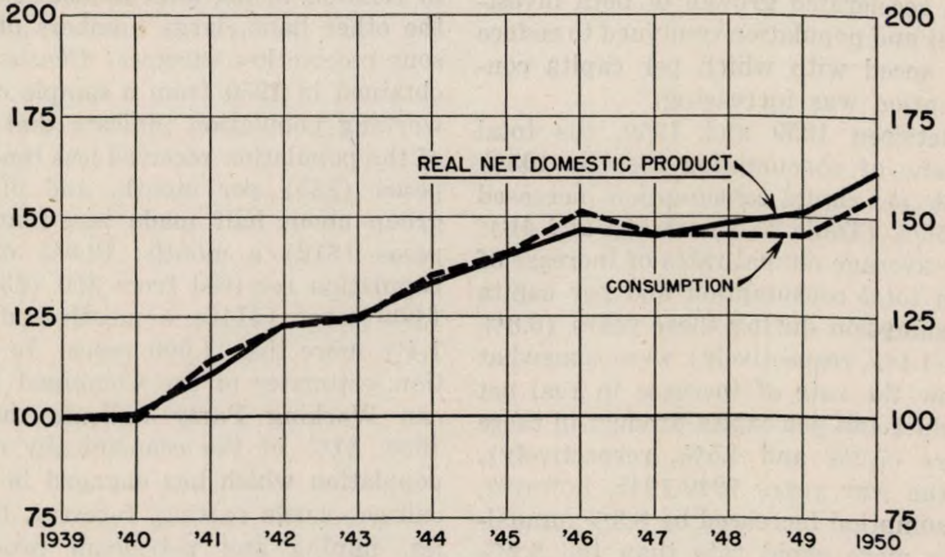
Ⓐ **REAL NET DOMESTIC PRODUCT, VOLUME OF INVESTMENT AND CONSUMPTION**

(INDEX, 1939 = 100)



Ⓑ **PER CAPITA REAL NET DOMESTIC PRODUCT AND VOLUME OF CONSUMPTION**

(INDEX, 1939 = 100)



SOURCE: Combined Mexican Working Party.

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precludes an accurate calculation of changes in birth and death rates. It appears, however, that the annual birth rate has been stable since 1930 at 43 to 45 live births per 1,000 inhabitants, while the death rate has fallen from 27 deaths per 1,000 inhabitants in 1930 to 23 in 1940 and 16 in 1950 (Tables 10 and 11). As a result of these changes the annual rate of increase in Mexico's population rose from 1.8% in 1940 to an average of 2.9% in 1947-1949, one of the highest rates of increase in the world (Table 9).

C. CONSUMPTION

The great increase in real income during 1939-1950 permitted a considerable rise in total consumption. Nevertheless, pressure on domestic incomes to finance a steadily increasing amount of investment limited the gains in consumption and the rapid rise in population slowed down the increase in per capita consumption. In the postwar period, slower expansion of real income and accelerated growth of both investment and population combined to reduce the speed with which per capita consumption was increasing.

Between 1939 and 1950, the total volume of consumption rose by 105% while per capita consumption increased by 55% (Table 24, Charts 4A and 4B). The average annual rates of increase of both total consumption and per capita consumption during these years (6.8% and 4.1%, respectively) were somewhat below the rate of increase in real net product and per capita product in these years (7.2% and 4.5%, respectively). In the war years 1940-1945, however, consumption increased by 8.3% annually, a more rapid rate than the 8.2% increase in real income in the same period (Tables 6, 7 and 24, Chart 4A). In spite of the fact, therefore, that the number of inhabitants was increasing by 2.3% annually during this period, per capita consumption rose by an average of 5.9% a year. On the other hand, the 4.9% increase in consumption during 1946-1950 was not only below the 5.9% increase in real income, but the rate at which population was growing had increased to 2.9% a year; consequently, per capita consumption rose by only 2.0% annually in the postwar period. Per capita consumption actually declined in 1947 and 1948 and was practically unchanged in 1949; however, a sizeable increase occurred in 1950.

As a result of the shift in the distribution of incomes in favor of profits and against wages and salaries, it is probable that a large part of the increase in consumption in 1939-1950 was enjoyed by a small part of the population. The number of persons who received about half the national income in the form of profits, rents and interest is unknown, but it must be small in relation to the total population. On the other hand, large numbers of persons receive low incomes. Census data obtained in 1950 from a sample of the working population indicate that 86% of the population received less than 300 pesos ($35) per month, and of this group about half made less than 100 pesos ($12) a month; 12.6% of the population received from 300 ($35) to 1,000 pesos ($116) a month and only 1.4% more than 1,000 pesos. In addition, estimates of the Combined Mexican Working Party indicate that in 1950, 61% of the economically active population which has engaged in agriculture, cattle raising, forestry, fisheries, mining and petroleum produced only 24% of the national income.

Although few in numbers, the higher

income class account for a large part of the demand for consumer goods imports. During the late war and early postwar years, when consumer goods became available again, the consumption of this group rose, and savings declined in relation to national income.

The standards of living for industrial workers and for agricultural workers in the new agricultural regions are well above those in the older unimproved farming areas. Improvements in the standard of living occurred for workers when they moved from the old agricultural lands into the new and expanding agricultural regions or into commerce and industry. These changes helped to raise the overall standard of living in Mexico. However, no significant improvement was discernible in the real income of farmers in the old areas or in that of industrial workers as a group, although, of course, the number of workers enjoying the higher standards of this group increased considerably.

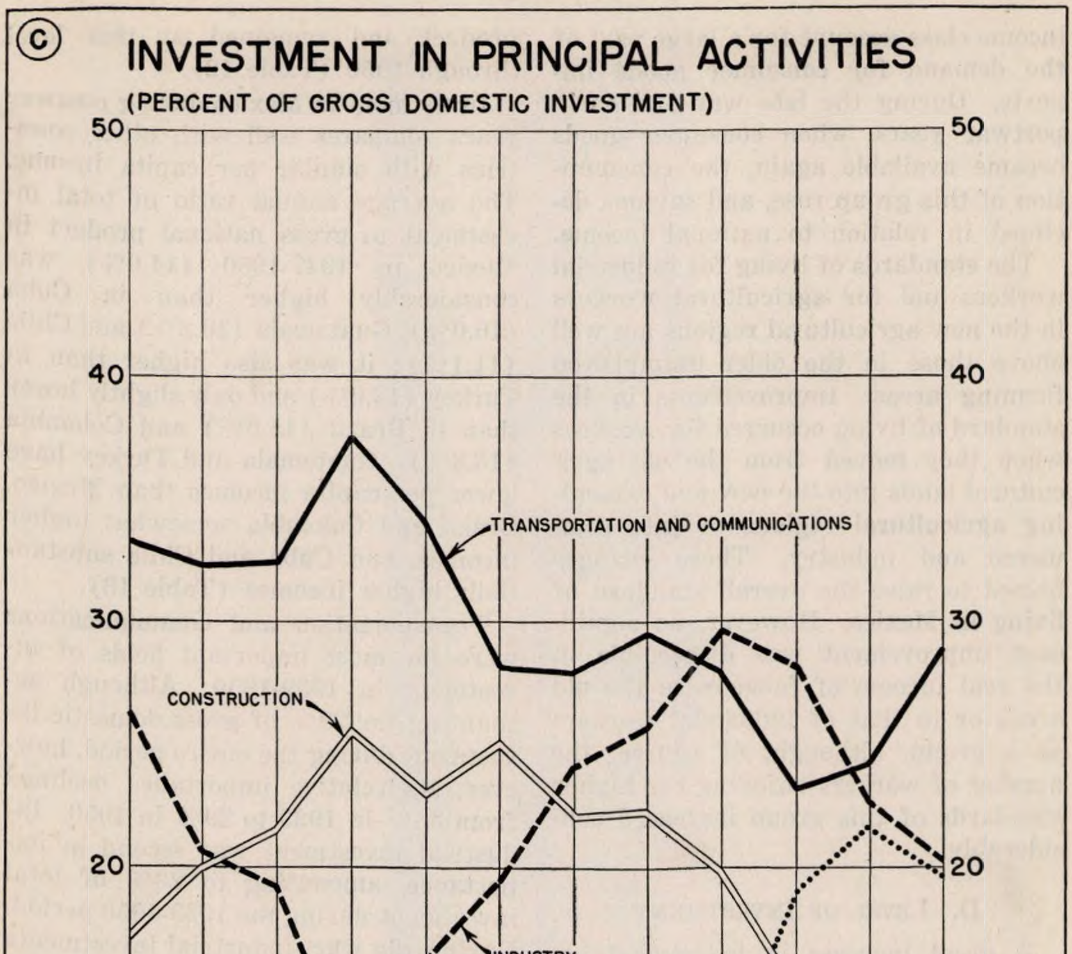
D. Level of Investment

A great increase in investment occurred from 1939 to 1950. From 649 million pesos in 1939, total investment (gross domestic investment excluding inventory changes) rose to 5,937 million pesos in 1950 (Table 12). In real terms the increase was almost threefold (Table 25, Chart 4A). Between 1939 and 1944, when wartime shortages of capital goods limited investment, the increase in investment did not exceed the growth in income and total investment remained at about 10% of gross national product. When supplies of capital goods increased at the end of the war investment rose much faster than the national product. In 1947, investment reached 14% of the gross national product and remained at this level through 1950 (Table 12).

Investment in Mexico during postwar years compares well with other countries with similar per capita income. The average annual ratio of total investment to gross national product in Mexico in 1947-1950 (14.0%) was considerably higher than in Cuba (10.0%), Guatemala (10.2%) and Chile (11.1%); it was also higher than in Turkey (13.0%) and only slightly lower than in Brazil (15.0%) and Colombia (15.8%). Guatemala and Turkey have lower per capita incomes than Mexico, Brazil and Colombia somewhat higher incomes, and Cuba and Chile substantially higher incomes (Table 13).

Transportation and communications were the most important fields of investment in 1939-1950. Although accounting for 28% of gross domestic investment during the entire period, however, its relative importance declined from 33% in 1939 to 29% in 1950. Industrial investment was second in importance, amounting to 23% of total investment during the 1939-1950 period. During the war, industrial investments declined sharply from 26% of total investment in 1939 to 12% in 1942. Towards the end of the war and in the first postwar years, such investments increased much more than any other to 30% of total investment in 1947. Since then they have declined to 20% of the total in 1950. Construction was the third most important field of investment in 1939-1950, accounting for 18% of the total. However, investments in construction have been declining in relation to other investment from 25% in 1942 to 15% in 1948-1950. On the other hand, agricultural investments have increased from 12-13% in 1939-1947 to 20% in 1950, and investments

CHART 5



Ⓒ INVESTMENT IN PRINCIPAL ACTIVITIES

(PERCENT OF GROSS DOMESTIC INVESTMENT)

SOURCE: Combined Mexican Working Party.

in petroleum, electric power, and transportation and communications have also been rising since 1947 (Table 15 and Chart 5).

The importance of public investment has been increasing in Mexico. In 1939, public investment accounted for 38% and private investment for 62% of total investment. In 1942 and 1943, when wartime shortages of industrial machinery and motor vehicles reduced private investment, public investment in highways, railroads, irrigation and construction increased to almost half of the total (48%). When capital goods imports were resumed, the share of public investment declined steadily to one-third of the total in 1946 and 1947. Since 1947, public investment has again risen rapidly and in 1950 reached 45% of total investment while the share of private investment declined from 66% in 1946-1947 to 55% in 1950 (Table 15).

Public investment predominates in transportation (except motor vehicles), petroleum and large-scale irrigation, and private investment in industry, agriculture (except large-scale irrigation), mining and building construction. The relative increase in public investment from 1939 to 1950, particularly since 1947, indicates the growing emphasis on the development of public works and communal facilities (social overhead), which make up the main part of public investment.

E. Financing Investment

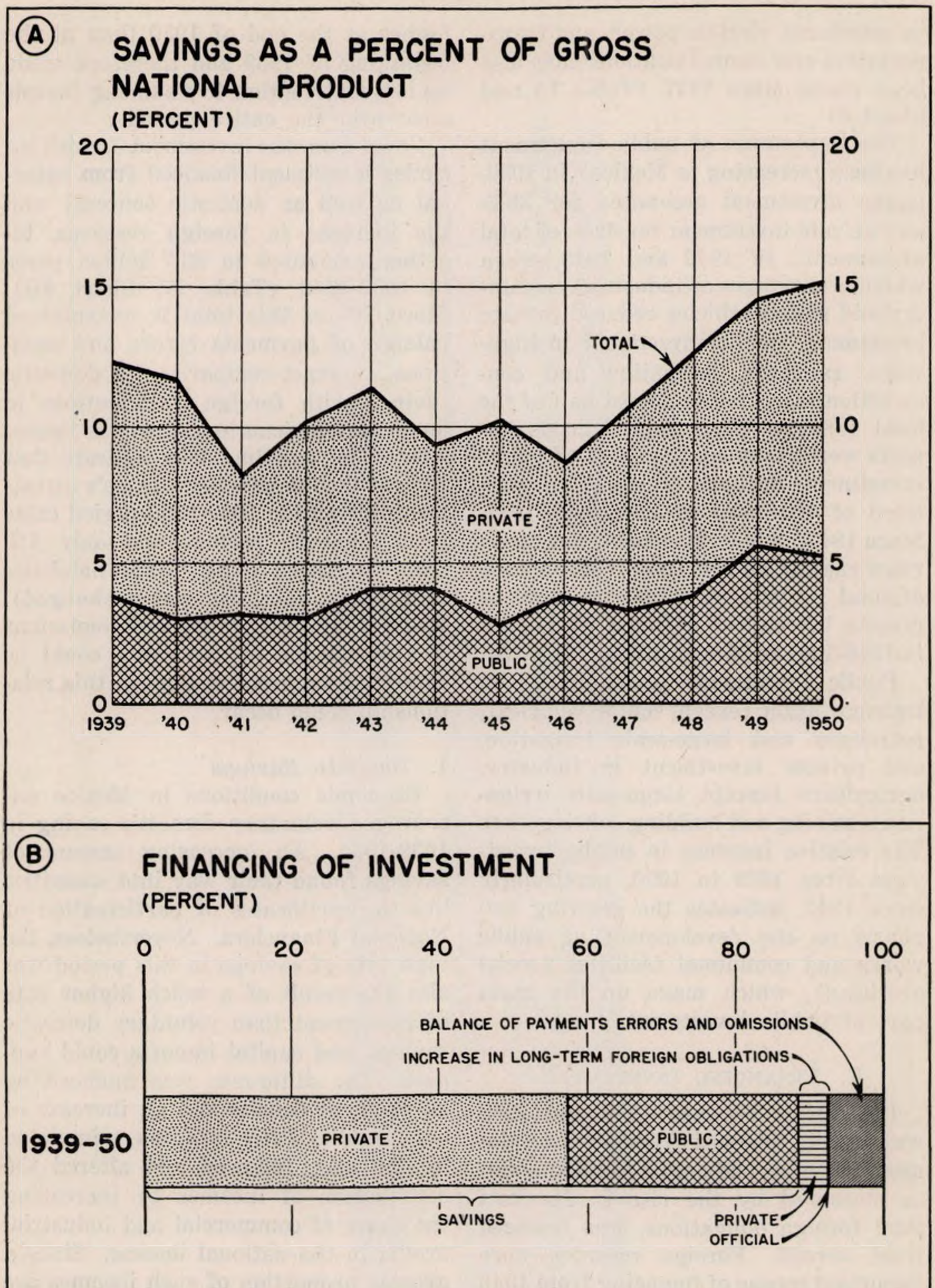
Investment between 1939 and 1950 was largely financed from Mexican domestic savings and only a small amount, as measured by the rise in Mexico's total foreign obligations, was financed from abroad. Foreign reserves were important means of financing from 1946 to 1948, but they were $249 million higher at the end of 1950 than at the beginning of 1939 and therefore made no net contribution to financing investment over the entire period.

Gross domestic investment (which includes investment financed from external as well as domestic sources) and the increase in foreign reserves, together amounted to 33.7 billion pesos in 1939-1950 (Table 27, Chart 6B). Since 7% of this total is unexplained balance of payments errors and omissions, an exact comparison of domestic savings with foreign contributions in financing Mexican investment is impossible. The existing data indicate that 89% of the finances for Mexico's investment during the 1939-1950 period came from domestic savings and only 4% from increased long-term liabilities (short-term liabilities were unchanged). Even if all the errors and omissions in the balance of payments could be corrected, no great change in this relationship could occur.

1. *Domestic Savings*

Economic conditions in Mexico encouraged voluntary domestic saving in 1939-1950. An increasing amount of savings found their way into securities like the certificates of participation of Nacional Financiera. Nevertheless, the high rate of savings in this period was also the result of a much higher rate of investment than voluntary domestic savings and capital imports could support. The difference was financed by government deficits and an increase of bank credit. Price inflation, stimulated by the war, followed and altered the distribution of incomes by increasing the share of commercial and industrial profits in the national income. Since a greater proportion of such incomes are saved than of wages and salaries, which

CHART 6



SOURCE: Combined Mexican Working Party.

No. 644

declined in relation to other incomes, savings increased. The savings of high income groups were also forced up during the war by the scarcity of consumer good imports, and in 1947-1950 by import restrictions.

During the war years 1940-1943, domestic savings averaged 10% of the gross national product. Between 1944 and 1946, when consumer goods in greater abundance and variety appeared on the market, the savings ratio declined to 9%; however, import restrictions beginning in 1947, followed by devaluations of the peso in 1948 and 1949, reversed the trend and the ratio of savings to national product increased from 11% in 1947 to 15% in 1950 and to an average of 13% for the 1947-1950 period (Tables 28 and 12, Chart 6A).

Mexico's postwar level of savings (13.4%) is high for a country with its per capita income. The 1947-1950 savings ratio is considerably greater than in Chile (10.1%), Guatemala (11.0%) and Turkey (11.0%), and close to that of Colombia (13.5%), Cuba (13.6%) and Brazil (14.0%) (Table 13).

Besides increasing in relation to the national product, Mexican savings have played an increasing part in financing investment. In 1939-1945 domestic savings financed 84% of total investment; in 1946-1950, they paid for 91% of the total.

Fluctuations in savings from 1939 to 1950 were primarily due to changes in private savings. Such savings first declined from an annual average of 7% of gross national product in 1940-1943 to 6% in 1944-1946, and rose thereafter to 9% in 1947-1950. On the other hand, public savings (difference between public net receipts and current expenditures plus earnings of public enterprises used to finance investment) remained almost unchanged from 1939 to 1948 at 3 or 4%, increasing to 5-6% in 1949-1950 (Tables 12 and 28, Chart 6A).

2. *Foreign Financing*

The relative importance of the foreign contribution to Mexican investment declined from 1939 to 1950. For the entire period the increase in Mexico's foreign obligations was 3.9% of gross domestic investment and the increase of foreign reserves. In the years 1939-1945, this ratio was 6.5% but after the war (1946-1950) it declined to only 2.7% (Table 27).

Almost all of the increase in long-term foreign obligations in 1939-1950 was private. Although official foreign long-term indebtedness hardly changed over the entire period, the share of government financing in the total has been growing since the end of the war. During the war years 1939-1945, official foreign indebtedness declined while private external liabilities rose appreciably; in the postwar years 1946-1950 official foreign loans have been used increasingly to finance investment while private foreign liabilities increased less than during the war. Nevertheless, the net increase in government external debt in 1946-1950 accounted for less than 1% of the investment and increase of monetary reserves in these years.

The importance of capital imports for Mexican economic development is greater than the statistics would indicate. The net figures quoted do not give an indication of the total capital inflows. Gross capital receipts are available only for official foreign loans. These show that in 1946-1950, for example, when the net increase in official external liabilities was only 0.8% of domestic investment and increased foreign reserves, gross receipts of foreign loans by the Government were 4% of domestic investment and the increase of foreign reserves.

Foreign loans and investments have also increased Mexican investment by more than their own amounts by stimulating an increase in domestic savings. In 1939-1950 certain investment projects were contingent upon foreign capital beyond what was available in Mexico to finance direct external costs; it is probable that without the foreign funds, Mexican investment would have been reduced by the peso as well as the foreign costs of these projects. Moreover, foreign capital has often helped to finance investment projects of crucial importance for the country's economic development. If foreign financing had not been obtained for electric power development, railroad rehabilitation, key industrial projects and the eradication of the foot-and-mouth disease, it is probable that progress would have been slower in these fields and in others as well.

In 1939-1950 Mexico paid an average of 320 million pesos ($55 million) annually in interest and dividends on foreign investments, 95% of which was on private investments (Tables 122 and 123). Although these payments, which include the cost of foreign investments made prior to 1939 as well as in 1939-1950, were only 1.5% of gross domestic product in 1939-50, they were equal to 13% of Mexican domestic savings in that period.

F. INVESTMENT AND OUTPUT

Increased use of capital equipment and the concentration of investment on projects which yielded high and quick returns, greatly increased the real domestic product in 1939-1950. This was especially true in the war years 1940-1945, when every peso of investment was accompanied by an increase of 0.65 peso in real income; but even the much lower increase of 0.36 peso for every peso invested in 1946-1950[2] was higher than the return in most other countries with developing economies (Table 26, Chart 2).

A high proportion of Mexican investment in 1939-1950 (43%) was in agriculture, petroleum, mining, industry and motor vehicles (Table 17, Category I). Investments in these fields usually yield greater and more immediate returns than other investments if yields are not limited by inadequate public facilities. Throughout most of 1939-1950, such limitations were unimportant. Moreover, within each of these fields, projects were available which required only small expenditures to yield exceptional results. Thus, the availability of lands which could be cleared or irrigated at little expense and high prices for agricultural exports made large returns possible from farm investment. In petroleum, investments were almost entirely confined to developing existing fields and adding refining and transportation facilities which yielded early results by increasing the amount of petroleum products marketed; on the other hand, very little was invested in exploratory drilling, where costs would have been higher and results less rapid. In mining, existing ore reserves in developed mining areas enabled production of industrial metals to rise with only small investment expenditures. Although the cement and iron and steel industries which required large amounts of capital advanced more rapidly than others, expenditures for these industries made up only a small part of total industrial investment.

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[2] The investment-output ratio (the ratio of gross domestic investment to the increase in real net domestic product in the same period) was 1.5 in 1940-1945 and 2.8 in 1946-1950 (Table 26).

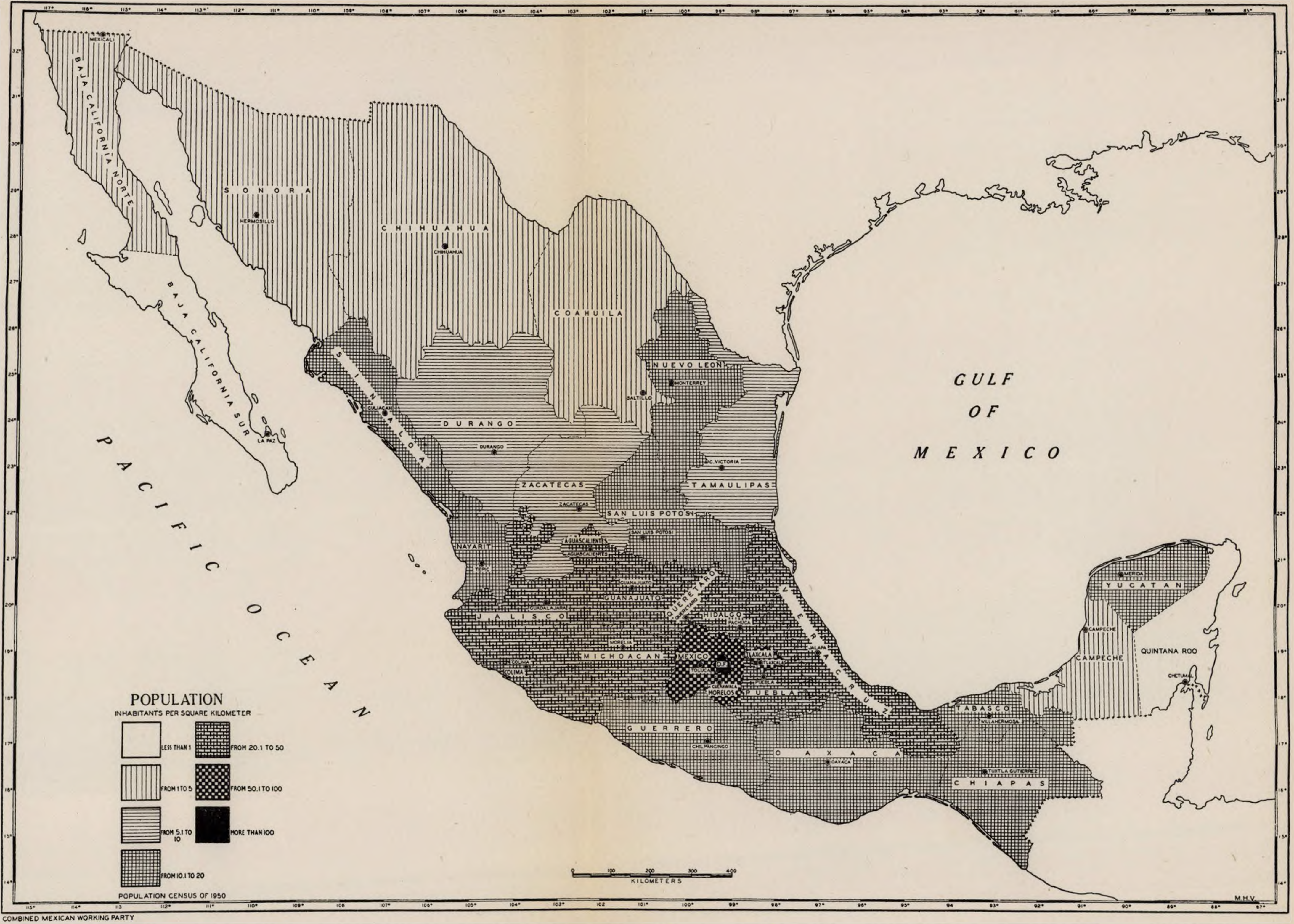
Investments could be concentrated in 1939-1950 on projects yielding high returns quickly because a large number of public facilities already existed which were not being used to capacity. The railroads, ports, communications systems, power plants and community works, could all take on additional loads, particularly in the first half of the period. Heavy investments would have to be made eventually for soil conservation, reforestation, petroleum exploration and development of new mining areas, none of which could be expected to yield large returns for some years. For the time being, however, these expenditures were postponable without seriously interfering with current production. Investments in public facilities (social overhead), including highways, railroads, large-scale irrigation, electric power and community works accounted for 36% of total investment in 1939-1950 (Table 17, Category II). In spite of the high expenditures for road construction and large-scale irrigation, this proportion is lower than would be possible for many other countries in Mexico's stage of development and no higher than for many countries in more advanced stages.

The small amount of housing and public buildings construction in 1939-1950 also helped increase investment yields. Residential, commercial and industrial construction (for which separate figures are not available) amounted to 18% of total investment during the entire 1939-1950 period and public buildings for 2% (Table 17, Category III). Compared with many other countries, these proportions are low. Although there was some construction of expensive housing for well-to-do, and of some hospitals and institutions of higher learning, total expenditures for these purposes were small in relation to total investment. In the 1939-1950 period, Mexico concentrated on the development of productive facilities and left for the future the main task of providing low-cost housing and adequate educational and health facilities for most of the population.

Output was also high because, except for the railroads, a small part only of Mexican investment in 1939-1950 was used for maintaining and replacing capital. For example, less than 2% of the total investment in public irrigation in 1947-1950 was devoted to maintenance; and only 14% of the total spent on highways in 1939-1950. The newness of much of the Mexican capital stock kept repair and replacement costs low, but under-maintenance was also partly responsible. Although likely to be costly in the end, the lack of proper maintenance helped during the 1939-1950 period to raise output in relation to investment.

Although in general the returns from investment in 1939-1950 were high, the returns from some investments were unnecessarily low through insufficient development of auxiliary sectors; the postponement of some long-term investments and expenditures for maintenance were often made at high cost in future yields, while other long-term investments were made which could have been postponed. Finally, little attention was sometimes given to fields where small investments could have greatly increased returns in short periods of time.

Despite these shortcomings, however, it must be concluded that an impressive increase in national income was achieved with limited resources from 1939 to 1950. In no previous period in Mexican history was the rate of economic growth as high as in this period. Mexico would be doing exceptionally well if the same rate of expansion in per capita income could be maintained over the next ten years.


GULF OF MEXICO
PACIFIC OCEAN
BAJA CALIFORNIA NORTE
BAJA CALIFORNIA SUR
SONORA
CHIHUAHUA
COAHUILA
NUEVO LEON
SINALOA
DURANGO
ZACATECAS
TAMAULIPAS
SAN LUIS POTOSI
NAYARIT
AGUASCALIENTES
JALISCO
GUANAJUATO
QUERETARO
HIDALGO
MICHOACAN
MEXICO
D.F.
TLAXCALA
MORELOS
PUEBLA
VERACRUZ
COLIMA
GUERRERO
OAXACA
TABASCO
CHIAPAS
CAMPECHE
YUCATAN
QUINTANA ROO
MEXICALI
HERMOSILLO
CHIHUAHUA
LA PAZ
CULIACAN
DURANGO
SALTILLO
MONTERREY
C. VICTORIA
ZACATECAS
SAN LUIS POTOSI
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QUERETARO
PACHUCA
MORELIA
TOLUCA
CUERNAVACA
TLAXCALA
PUEBLA
JALAPA
COLIMA
CHILPANCINGO
OAXACA
VILLAHERMOSA
TUXTLA GUTIERREZ
CAMPECHE
MERIDA
CHETUMAL
POPULATION
INHABITANTS PER SQUARE KILOMETER
LESS THAN 1
FROM 1 TO 5
FROM 5.1 TO 10
FROM 10.1 TO 20
FROM 20.1 TO 50
FROM 50.1 TO 100
MORE THAN 100
POPULATION CENSUS OF 1950
0 100 200 300 400
KILOMETERS
M.H.V.

COMBINED MEXICAN WORKING PARTY

CHAPTER II

Agriculture, Livestock, Forestry and Fisheries

A. AGRICULTURE

1. *Investment in Agriculture*

The importance of agricultural investment, particularly private agricultural investment, has been growing. The share of agriculture and livestock in total investment increased from an average of 12% in 1939-1947 to 20% in 1948-50. The change was more marked in the private sector, 19% of which was devoted to agriculture in 1948-1950 compared with 9% in 1939-1947. The shift of public investment towards agriculture (from 17% to 22%) was directly due to extraordinary expenditures for the eradication of foot-and-mouth disease, and investment in irrigation, the chief field of public agricultural investment since 1939, showed no relative increase. For the whole period 1939 to 1950, private and public investment each accounted for about half of the total investment in agriculture, but the relative importance of private investment increased from 45% of the total in 1939-1947 to 56% in 1948-1950 (Table 29).

Private agricultural investment has been stimulated in recent years by favorable world prices and by official policy and investment. Public irrigation and highway construction have paved the way for private investment in land clearing, farm machinery and small-scale irrigation. In addition, private investment has been aided by an increase in the credits granted by official agricultural banks and by agrarian laws which increased the legal maximum size of private holdings and provided more secure tenure of land.

2. *Regional Differences in Agricultural Development*

Agricultural development between 1939 and 1950 was confined chiefly to the northern states of Mexico and to some tropical and semi-tropical regions where there was scope for irrigation and the expansion of cultivation. In the south-central plain, traditionally the most important agricultural part of the country, development has been slow. In this region, where all the arable land is used and where only limited possibilities exist for irrigation, increased production could be achieved only by improving farming methods.

Statistics on regional variations in agricultural development during the decade ending in 1950 will become available when the figures for the 1950 agricultural census are released. However, existing data clearly indicate the broad outlines of these differences. According to figures published by the Ministry of Agriculture in October 1951, the cultivated area in five sections of the country (the northern States of Sonora, Chihuahua and Tamaulipas, the Northern Territory of Lower California and the State of San Luis Potosi), increased by a total of 1.7 million hectares from 1940 to 1950, an amount equal to over 60% of the total increase in harvested area during this period (Table 40).

Most of the increased production in the new thinly-populated agricultural areas is attributable to greater use of machinery. As these areas developed, they were able to absorb some of the excess workers in the densely-populated central part of the country. Nevertheless, the emphasis on mechanization limited the number of workers who could be absorbed. Consequently, little relief has been provided for the chronic unemployment and under-employment in the older regions where most of the surplus agricultural workers seeking jobs as *braceros* north of the border originate. Moreover, such efforts as have been made by the official Comision Nacional de Colonizacion to promote agricultural resettlement have been on too modest a scale to cause an appreciable decline in the number of unemployed.

The form in which land is held, as well as the size of the holdings, is significantly different in the new agricultural areas from that in the old ones. Although recent data on landholdings are lacking, it is known that individual ownership and larger holdings are more common in the newer regions than in the old, where the *ejido* and smaller holdings are the prevailing forms in which arable land is held. Changes in agrarian laws have increased the legal maximum size of individual holdings of arable land to 100 hectares and given private landholders greater security of tenure. These changes stimulated private investment and agricultural development in the new regions.

3. *Financing Agricultural Investment*

Before 1947, agricultural investments were financed entirely from domestic sources. Between 1947 and 1950, however, 14% of all agricultural investments were financed from abroad through grants from the United States for the eradication of foot-and-mouth disease, loans from the Export-Import Bank for the construction of a fertilizer plant and the purchase of farm machinery, and Bank of America loans for irrigation (Table 29). As expenditures for the foot-and-mouth disease campaign come to an end, this proportion should decrease unless future agricultural development is financed by external loans more than in the past.

Direct government financing has declined in relation to private financing and credits extended by public banks. In 1939-1946, private resources accounted for 39% of the domestic financing of agricultural investment and public banks for an additional 8%; by 1947-1950, these ratios had increased to 46% and 16% respectively. During the same years, the contribution of direct government financing, including small sums from state governments and autonomous public agencies, declined from 53% to 38% (Table 29).

4. *Agricultural Credit*

The ratio between crop credit extended by public and private banks and the value of agricultural output did not change appreciably between 1939 and 1950, which helps explain the slow progress in the use of fertilizer, improved seed and better equipment. On the other hand, medium-term agricultural credit extended by public banks has increased greatly in recent years, thus making possible additional private investment in small-scale irrigation, land clearing and machinery.

The amount of *avio* or crop loans extended annually by three public banks (The National Ejidal Credit Bank, the National Agricultural and Livestock Credit Bank and the National Foreign Trade Bank) increased from 58 million pesos in 1939 to 338 million pesos in 1950. However, such loans remained at about 5% of the value of agricultural production throughout the period. On the other hand, available information indicates that agricultural credit granted by private banks (mainly for crops), expressed as a proportion of the value of agricultural production, decreased from 3.7% in 1943-1946, the earliest years for which overall data exist, to 2.8% in 1947-1950 (Table 34).

It has become increasingly common in recent years for export crops to be financed by credit extended by processing plants and by foreign crop buyers. The big profits made by many growers of export crops have also led to more self-financing. However, growing export crops is only a small part of Mexican agriculture and the number of farmers affected by these developments is small. In recent years, public banks have sought to shift their credit operations to the principal food crops grown for domestic consumption (Table 35).

According to competent observers, lending by merchants and other money lenders on usurious terms accounts for more than half of Mexico's crop credits. Since crop credits extended by banks have not expanded in relation to agricultural output, it is unlikely that there was any appreciable decline in the proportion of usurious credit to total crop credits from 1939 to 1950.

The increase in medium-term investment loans extended by public banks has been the most important development in the field of agricultural credit in recent years. Such credits rose from a level of 10 to 20 million pesos annually in 1939-1946 to 195 million pesos in 1950, an increase which had an immediate effect on production because such investments were concentrated largely on small-scale irrigation, land-clearing and purchases of farm machinery. Investment credit had accounted for a small part of the lending operations of public banks in 1939-1946 (12% of annual loan disbursements); in 1947-1950, however, it was equivalent to nearly one-third (32%) of annual loans (Table 34). The increase, which was financed with funds from the Federal Government and government agencies, not only raised the share of the public banks in the financing of agricultural investment from 10% in 1939 to 15% in 1950, but also helped to improve the position of agricultural investments relative to other investment in 1947-1950.

The National Ejidal and the National Agricultural and Livestock Credit Banks together account for over 90% of the credit extended by the three public banks operating in the field. Neither receives savings in appreciable amounts nor sells bonds to the public, and both depend mainly on the Federal Government and other public banks for funds. In recent years, they have also received some funds from private contractors engaged in land clearing and well-drilling operations, from dealers of agricultural machinery and from purchasers of agricultural commodities. In 1947-1950, these private sources furnished 20% of the net increase in funds available to the two banks (Tables 36 and 37).

Up to 1949 the Bank of Mexico, directly or through the medium of the National Foreign Trade Bank, was the principal source of funds for the two agricultural banks. In that year, the Government assumed the debts owed by the agricultural banks to the Bank of Mexico and the National Foreign Trade Bank, and all rediscounting and other operations by these banks for the two agricultural banks were discontinued. Since then, the Federal Government has made available new funds to the agricultural banks in the form of special trust accounts, which have become in effect revolving funds (Tables 36 and 37).

However, these funds have not all been available for additional loans, since the average length of loans made has been increasing and a considerable number of loans are probably frozen without being considered uncollectible. The funds obtained from the Government have made it possible for the agricultural banks to increase investment credit significantly, but the amounts received have not been large enough to allow an expansion in crop credits proportionate to the value of agricultural production.

At the present time no program exists for expanding the credit operations of the two agricultural banks. The Government has followed the practice of providing the banks with additional funds only when it considers the need sufficiently urgent. Consequently, the agricultural banks have not been able to formulate their own lending programs except for short periods in advance. The methods by which funds for the banks have been raised have been varied and complex. The recent practice of the Federal Government of providing funds through trust accounts further complicates the operations of the banks and circumscribes their freedom of action.

5. *Composition of Agricultural Investment*

a. Private Agricultural Investment. Machinery and implements were the most important forms of private agricultural investments, accounting for 35% of such investments in the years 1939-1946, as well as in 1947-1950. The proportion of investments in land clearing to the total also remained unchanged at 15%. On the other hand, private irrigation, which up to 1947 had been of minor importance, in 1947-1950 accounted for 20% of private agricultural investment (Table 29).

Investment in livestock declined from 29% of private agricultural investment in 1939-1946 to only 14% in 1947-1950, mostly because of foot-and-mouth disease, the consequent U.S. ban on live cattle imports from Mexico following the outbreak of that disease, and the severe droughts in the northern cattle country in recent years.

Miscellaneous investments, mainly in plants for processing agricultural commodities, accounted for 16% of private agricultural investment in 1939-1950. No information is available on private investments in forestry and fisheries which are therefore not included in the estimate of agricultural investment.

b. Public Agricultural Investment. Public agricultural investment in 1939-1950 was mainly in irrigation, especially large irrigation projects, and expenditures for the promotion of improved agricultural methods, for research and extension services, and for the protection and improvement of natural resources were conspicuously low.

During the years 1939-1946, irrigation absorbed no less than 95% of total public agricultural investment. In 1947-1950, only the heavy extraordinary expenditures for the eradication of foot-and-mouth disease, which equalled 25% of public agricultural investment in that period, brought the proportion of public irrigation investments down to 67% of the total (Table 29). On the other hand, expenditures by the Ministry of Agriculture and autonomous agricultural commissions (the Corn, Coffee and Olive Commissions) for research and experimental work, for the promotion of improved agricultural methods and for construction and resettlement amounted to only 2.9% of public agricultural investments in 1939-1946 and declined to 2.4% in 1947-1950. If investments in the fertilizer industry, which acquired some importance in 1949 and 1950, are added to the investment expenditures of the Ministry of Agriculture and of the autonomous agricultural commissions, total investment for the improvement of agricultural methods may be estimated at only 3.7% of public agricultural investment in 1939-1946 and 6.8% in 1947-1950 (Table 29 and Chart 7).

Expenditures for soil conservation and reforestation have also been low, and have declined in comparison with other agricultural investments. Between 1939-1946, these expenditures amounted to 1.5% of public agricultural investment; in the years 1947 to 1950, they were equivalent to only 0.6%. In addition to public investments for reforestation, some private investments have been made for this purpose, but no information on these investments is available.

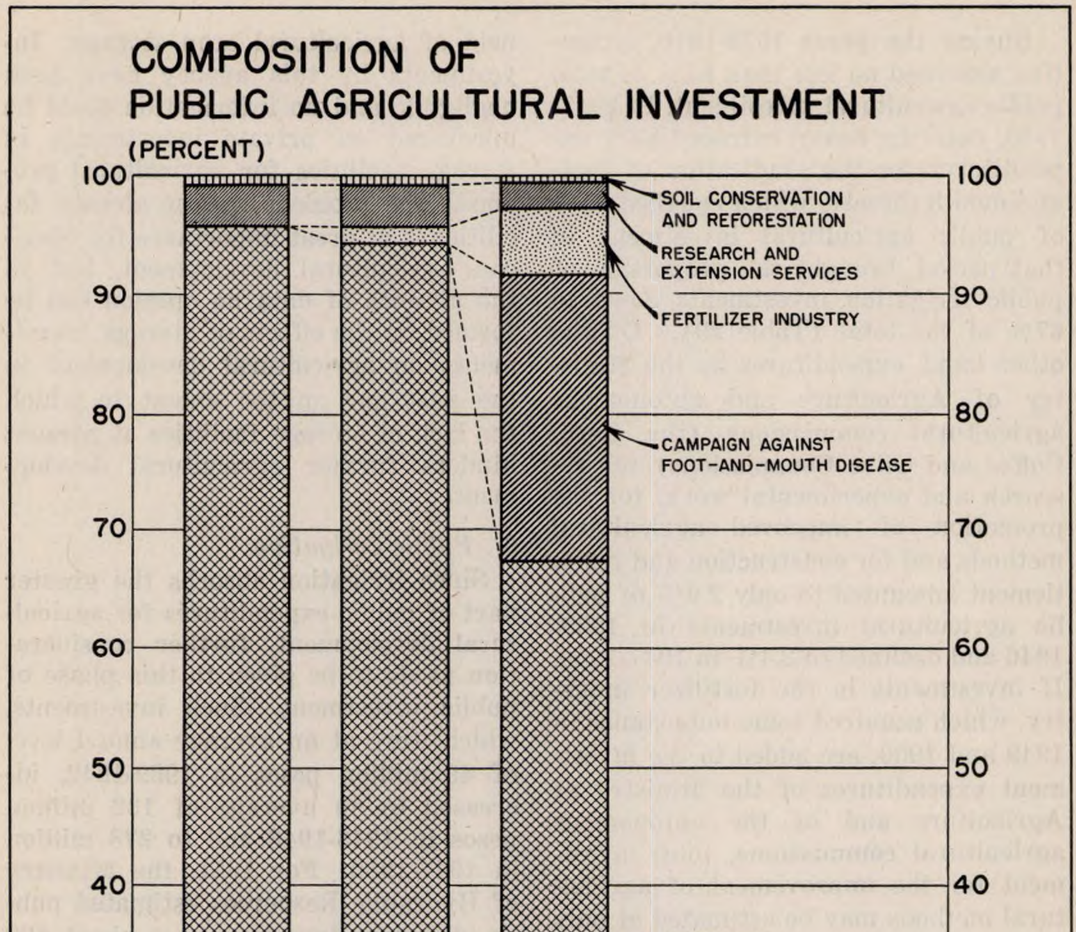
A public agency, Almacenes Nacionales de Deposito, is operating in the field of agricultural crop storage. Investments by this agency have been negligible and no information could be uncovered on private investments in storage facilities for agricultural produce. The problem of crop storage facilities is of great importance for Mexican agricultural development, but in the absence of data no opinion can be formed on the effects of storage investments on agricultural development in the past nor on the extent to which the lack of storage facilities at present hinders further agricultural development.

6. *Public Irrigation*

Since irrigation absorbs the greater part of public expenditures for agricultural development, further consideration needs to be given to this phase of public investment. Such investments, which were at an average annual level of 49 million pesos in 1939-1942, increased to an average of 132 million pesos in 1943-1946 and to 278 million in 1947-1950. For 1951, the Ministry of Hydraulic Resources estimated public irrigation investments at about 500 million pesos (Table 38).

Irrigation investments have been financed mainly from the federal budget and, in 1941-1942, by the issue of irrigation bonds. Other sources of financing, particularly contributions from future users of the water, have acquired some importance since 1947. In 1950, appropriations by the Federal Government accounted for 75%, private contributions for 13%, foreign loans for 3%, appropriations of state governments for 1% and unspecified financing, mainly short-term indebtedness to contractors, for 8% (Table 38). The Ministry of Hydraulic Resources estimated that in 1951 private contributions and foreign loans increased in importance.

CHART 7



SOURCE: Combined Mexican Working Party.

In spite of the increasing amounts spent on public irrigation and its predominant position in agricultural investment, it has so far yielded only a part of its potential effect on production. Nor has public irrigation been the major element in increasing agricultural output in the twelve-year period 1939-1950. Most official investments for irrigation have been for large-scale projects. Because of their longer construction period, it could not be expected that such projects would begin to yield returns as quickly as small-scale projects. In Mexico, however, the lag has been unduly prolonged by spreading resources over many projects at the same time, by delays in completing auxiliary irrigation works and by the failure to take steps to improve farming methods in the newly-irrigated areas.

Large-scale irrigation absorbed 88% of public irrigation investment between 1941 and 1946, excluding administrative and maintenance expenditures and the Valley of Mexico project, which is only incidentally an irrigation project; in 1947-1950, this ratio increased to 92.5%, including investments in two multi-purpose river development projects, the Papaloapan and Tepalcatepec works.

Initiated in 1946 and 1947 respectively, the Papaloapan and Tepalcatepec projects have been absorbing increasing proportions of irrigation investment. In 1950 they accounted for 18% of total expenditures (excluding administrative expenses, maintenance costs and costs of the Valley of Mexico project). An increase of more than 100% over 1950 expenditures on the two projects was expected for 1951 although total expenditures for irrigation were expected to rise by only 35% (Table 38). A third multipurpose project is also being planned for the river El Fuerte in Sonora, and a commission charged with the execution of this project was appointed in 1951.

On the other hand, small irrigation works declined from 12% of public irrigation investment in 1941-1946 to 7.5% only in 1947-1950 (Table 38). The more immediate effect of the smaller projects on production is illustrated by data of the Ministry of Hydraulic Resources that, although the smaller projects absorbed only 7.5% of public irrigation investment in 1947-1950, they were responsible for 27% of the increase in irrigated area during the same period. However, the Papaloapan and Tepalcatepec projects had yielded no increases in irrigated area by the end of 1951, even though they had been under construction for four or five years at a cost of 126 million pesos in 1947-1950, almost double the 69 million pesos spent on small-scale irrigation in the same years.

In 1950, no less than 37 large-scale irrigation projects, besides the two multi-purpose river development projects, were in course of construction. Partly because of the diffusion of effort, relatively small expenditures have been delayed in some cases which could have brought more than proportional increases in production almost immediately. The irrigation district of Valsequillo in the State of Puebla, which members of the Working Party visited, is a case in point. In this district, the dam and the most important section of the main canal, including a tunnel of 11 kilometers under the continental divide, were completed in 1947 at a cost of 149 million pesos. Between 1948 and 1950, after the dam and tunnel had been finished, average annual expenditures dropped to only 8 million pesos. Construction of the distribution canals proceeded so slowly that, as a result, in 1951, 20 to 30% of the district still remained unconnected to the main water supply system. In the case of the Valsequillo District, as in others, a comparatively small increase in expenditures would have brought about a more immediate increase in agricultural production than would have the starting of new projects in other parts of the country.

Although the opinions of the Ministries of Agriculture and Hydraulic Resources differ on the matter, there is no doubt that the delay in finishing auxiliary and maintenance works in irrigation districts is also an important reason for increasing the lag between investment expenditures and productive results in publicly-sponsored irrigation areas. Revenues from the irrigation districts, composed of payments from users of the water, supplemented by subsidies from the Federal Government, are supposed to provide funds for necessary complementary works and adequate maintenance, but have not sufficed for these purposes. According to an investigation carried out by the Ministry of Agriculture in 1946, it was estimated that 61 million pesos would be required for maintenance and to complete complementary works. In spite of this, actual expenditures for these purposes in the subsequent four years between 1947 and 1950 amounted to only 18 million pesos (Table 38). In its annual report for 1950-1951, the Ministry of Hydraulic Resources, which in 1951 took over responsibility for the operation of irrigation districts from the Ministry of Agriculture, stated that maintenance and auxiliary works would cost much more at current prices than the Ministry of Agriculture estimated in 1946, although only 11 million pesos was considered necessary immediately.

The fact that investments in irrigation have not been accompanied by adequate measures for improving farming methods (such as the use of fertilizers and improved seed, crop rotation, and even the proper use of the water supplied by irrigation), has also kept production in publicly-irrigated areas lower than could have been expected. Improved farming methods, especially the use of machinery and to some extent of fertilizer and insecticides, have advanced further on irrigated lands than in other areas. However, even in the irrigation districts, these developments are only beginning and the considerable investment in irrigation cannot be expected to yield its full potential output until better agricultural methods are more widely adopted. From a practical standpoint, this would be possible only by means of larger government expenditures for extension and other educational services and increased agricultural credit.

Only a minor part of the increase in harvested area between 1939 and 1950 can be traced to the effects of public irrigation. During this period, the area served by public irrigation works increased by an estimated 948,000 hectares. However, an important proportion (43%) of this area, was improved lands previously cultivated, in many cases already partially irrigated. New lands actually opened up by public irrigation from 1939 to 1950 were estimated at 537,000 hectares (Table 39). This area is not strictly comparable to the increase in total harvested area during the same period, since only a portion of the irrigated lands are brought under cultivation immediately and also because some land is harvested more than once a year. However, an indication of the small importance of public irrigation in increasing the harvested area is obtainable from the fact that new lands opened up by public irrigation were equivalent to only 19% of the total increase in harvested area from 1939 to 1950, and to only 15% of the increase from 1946 to 1950 (Tables 39 and 40).

Public irrigation must have increased agricultural production to a greater extent than harvested area, since experience indicates that (1) yields on irrigated lands are higher than those on non-irrigated land, (2) formerly-cultivated lands are improved by new irrigation, and (3) annual variations in crop yields are smaller on irrigated than on non-irrigated lands. Statistical information on production is not available for all irrigation districts but, according to an approximation by the Ministry of Hydraulic Resources published in its annual report for 1949-1950, the rise in the value of production in irrigation districts between 1946 and 1950 was 700 million pesos, 22% of the total increase in agricultural production during this period as estimated by the Bank of Mexico.

On the basis of these data, therefore, it may be concluded that although public irrigation accounted for nearly 60% of total public and private agricultural investment from 1939 to 1945 and approximately 40% from 1946 to 1950 (excluding investments in livestock and expenditures for the eradication of foot-and-mouth disease), not more than 20 to 30% of the increase in agricultural production in recent years can be traced to its effects. While severe droughts in recent years may be partly responsible, the lags between investments and increased production were undoubtedly lengthened by the dispersion of available resources over a considerable number of large-scale projects, and to delays in effectuating necessary complementary works and in taking measures to improve farming methods in the new irrigated areas.

7. *Agricultural Production*

The average annual rate of increase of agricultural production, which amounted to 4.7% in the period 1940 to 1949, increased slowly from 4.4% in 1940-1944 to 5.0% in 1945-1949; according to preliminary estimates, the increase in production in 1950 amounted to 16.1% (Table 48). The rise in output since 1939 was due to more intensive use of arable land, extension of cultivated area and improvement of old and new lands by irrigation. Greater use of new and improved lands made it possible to grow more valuable crops and to increase yields. Better farming methods contributed little to higher yields.

a. Increase in Harvested Area. From 1939 to 1950, the average increase in harvested area was 3.1% per annum. As in the case of agricultural production, the area harvested expanded slowly up to 1949, the increase averaging 1.9% annually in 1940-1944 and 2.3% in 1945-1949; also as with production, preliminary and somewhat tentative estimates for 1950 show a greater than usual increase, 13.4% over the previous year (Table 42). Next to changes in the relative distribution of crops on cultivated area, the increase in harvested area was the most important factor in raising agricultural production between 1940 and 1949, accounting for 47% of the increase in 1940-1944 and for 31% in 1945-1949; in 1950, however, the rise in harvested area was the principal reason for the increase in output, being equivalent to 65% of the increase in that year (Table 51).

Only statistics on changes in harvested area (which take account of lands planted more than once a year) are available for 1939-1950. Until the results of the agricultural census of 1950 are announced, no quantitative estimates can be given of the relative importance of the expansion of cultivation, decreases in fallow lands, and reduced destruction of crops by droughts and other natural phenomena in increasing the amount of the harvested area. It appears likely, however, that increased use of arable land, made possible in part by irrigation and improved agricultural methods, was an important element in increasing the amount of the area harvested. A large amount of land still remains fallow. On the other hand, the clearing of lands unfit for cultivation because of the danger of erosion, and greater use of land without a corresponding improvement in agricultural methods also may have been significant in increasing harvested area, but no quantitative indication of the relative importance of these factors can be found at the present time.

The clearing of land in non-irrigated areas appears to have been considerably more important than irrigation in increasing the amount of land cultivated. Although lack of data on land brought under cultivation by private irrigation makes the picture incomplete, this conclusion seems warranted by the fact that only 19% of the total increase in harvested area between 1939 and 1950 came from new lands opened by public irrigation and is supported further by published data of the Ministry of Agriculture for the 1940-1949 decade attributing only 37% of the increase in cultivated area in five northern states to irrigation and the remaining 63% to non-irrigated lands.

Until 1946, private irrigation was only of minor significance in increasing the area cultivated. After that year, investments in private irrigation expanded greatly, and fragmentary statistics on the area of land irrigated with the financial aid of the agricultural banks reveal that private irrigation, which is limited almost entirely to small-scale works utilizing subsoil water, has been in recent years of considerable and rising importance in increasing the area of cultivated land. These data also indicate that between 1947 and 1950, the effects of private investment expenditures, in terms of land brought under cultivation, have been relatively greater than the results obtained from public irrigation expenditures. For the entire 1939-1950 period, however, public irrigation was responsible for the major part of the increase in irrigated lands.

b. Increase in Yields. Although agricultural yields on the whole declined slightly in the years 1940-1944, they were on the average 7.5% higher than in 1939 during the period 1945-1949, and, according to preliminary estimates, 14.5% higher in 1950 than in 1939 (Table 50). The increase in yields accounted for 23% of the rise in agricultural production in the twelve years from 1939 to 1950 and contributed less to the expansion of output than either the increase in harvested area or changes in the distribution of harvested area among crops; for 1945-1949, however, higher yields were more important than the other two factors, accounting for 36% of the increased production in those years (Table 51).

For most of 24 major agricultural crops, yields increased over 1939 by up to 20% in 1945-1949 (Tables 49 and 50). During 1935-1939, a period of great agrarian reform, there was a considerable decline in the yield of some crops, particularly those of the plantation type. The yields for some of these (oranges, lemons) have been increasing, although they have not yet reached pre-1935 levels, while for cotton, the 1945-1949 yield is similar to the 1930-1934 average; for other crops (coffee, henequen, bananas), the decline in yields has continued. Consequently, only a few crops (mainly tomatoes, corn, wheat, flaxseed and pineapples) show significant increases in yields per hectare.

The increases in yields between 1939-1950 were due primarily to the extension of cultivation to superior new lands and to improvements of old lands placed under irrigation. On the other hand, no significant rise in yields occurred in the older unimproved agricultural regions. According to a study of Mexican agriculture by Mesa Andraca and Alanis Patino,[1] over 50% of the corn and wheat produced in Mexico during the 1920's came from the central part of the country which has been cultivated longest and where yields are lowest; in recent years, since the new and irrigated lands came into production, only 30 to 40% of these crops have come from that area.

The higher yields obtained on the new lands were due to the virgin soil, to relatively greater use of irrigation, and in some cases, to more favorable climatic conditions than in the older regions. In part, also, the higher yields of the newer regions were the result of relatively advanced agricultural methods, the adoption of which has been facilitated by the larger size of agricultural units. On the whole, however, the increase in yields is attributable only in limited degree to the use of improved seed and of fertilizer, or to other improvements in agricultural methods.

Although of great potential importance, efforts to produce and to encourage the use of improved seed suited to Mexican conditions have so far had little effect on production. In cooperation with the Rockefeller Foundation, the Ministry of Agriculture in 1943 started a research program for the production of hybrid corn seed. By 1947 the work had advanced to such a point that a Corn Commission was created to distribute the seed. Between 1949 and 1951, the Corn Commission distributed each year from 2,700 to 2,800 metric tons of hybrid seed, which has been sown in an area of 230,000 hectares, approximately 4% of the total harvested area for corn.

On the basis of an estimate by Mesa Andraca and Alanis Patino that the use of hybrid seed increases yields by about 25% per hectare, it can be determined that less than 2% out of an overall increase of 58% in corn production between 1939 and 1950 was attributable to the use of hybrid seed distributed by the Corn Commission. The operations of the Corn Commission have also stimulated the annual planting of about 6,000 tons of improved seed produced by private agencies. Although such seeds produce higher yields than unimproved varieties, the yield, nevertheless, is lower than for the Commission's seed.

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[1] Manuel Mesa Andraca and Emilio Alanis Patino, *La Agricultura en Mexico, Problemas Agricolas e Industriales de Mexico*, No. 1, Vol. III, 1951. Reference to this study is indicated when the authors' names are mentioned hereafter in the text.

Since yields from hybrid corn seed decrease unless fertilizer and other improved techniques are also used, the Corn Commission has been turning its attention to the promotion of improved methods of cultivation. For 1952 and 1953 no increase in the distribution of improved corn seed is contemplated. However, the distribution of hybrid seed for sorghum, soya and clover was begun recently.

Seed improvement for most other crops has been even less important than for corn. The Wheat Commission, a body responsible for the distribution of improved wheat seed, estimates the area sown with hybrid wheat in 1950 at 10,000 hectares (1.7% of the harvested area for wheat during that year) and at 35,000 hectares in 1951. In the case of sugar, improved varieties are now widely grown. However, the beneficent effects of improved varieties and increased use of fertilizer in raising yields have been partially offset by an expansion of sugar cultivation on non-irrigated land. Although they may prove to be of considerable importance in the future, measures taken to promote the cultivation of other crops (e.g., through the establishment of the Coffee Commission and the Olive Commission in 1950) are of too recent a date to have had any effect as yet on production.

The use of fertilizer is at a low level and did not increase significantly in the twelve-year period 1939-1950. Domestic production of fertilizer, mostly by a government enterprise, the Guanos and Fertilizers Company, averaged 20,000 metric tons annually between 1945 and 1949 and increased to 43,000 metric tons in 1950 (Table 52). In 1951, a new plant, with an annual production capacity of 66,000 metric tons of ammonium sulphate, started operations. It is expected that the plant, which is owned by the Guanos and Fertilizers Company, will be able to sell fertilizer at a price 40% or more below the price of imported fertilizer. Besides domestic production, fertilizer imports averaged 19,000 metric tons annually in 1945-1950 (Table 52).

The use of fertilizer has been almost entirely limited to a few crops grown on new agricultural lands. Since the extent to which fertilizer can be employed to increase output depends on the nature of the soil, climatic factors and the kinds of crops grown, no precise estimate can be given of the total amount of fertilizer which Mexico could utilize economically. It is clear, however, that the amount of fertilizer consumed at the present time is far below the country's potential consumption and that the expected output from the new ammonium sulphate plant will not alter the situation materially. Plans are currently being prepared for a further expansion of the fertilizer industry. However, the problem of the increased use of fertilizer in Mexico is much broader than that of providing adequate production facilities, closely linked as it is with the need for improved cultivation methods and for increased agricultural credit.

Plant diseases have been brought under better control since 1939, but they are still a grave problem. The 50% decline in banana production from 1939 to 1950 was due principally to the effects of sigatoka disease. Banana plants in the main producing areas are now being sprayed regularly and the use of insecticides for other crops, especially cotton and citrus fruits, has increased greatly. Imports of insecticides increased from 500 metric tons in 1939, to 3,200 tons in 1949 and to 11,900 tons in 1950 (Table 53). There is no production in Mexico of the active ingredients in insecticides but several mixing plants are in operation.

Agricultural methods in Mexico are generally poor. Agricultural implements used in most regions are still primitive, and crop rotation is almost unknown. Although requiring relatively small capital expenditure, a successful program to promote improved agricultural techniques would demand a considerable expansion of facilities and coordinated effort in a variety of fields, including research and experimentation, education and extension work, and agricultural credit. Moreover, such a program would be hampered in large areas by the excessively small size of land holdings. Attempts have been made in recent years to promote better farming techniques, but such measures have not been emphasized in official agricultural policy and progress has been slow.

c. Changes in Distribution of Crops on Cultivated Area. Between 1939 and 1950, important changes occurred in the distribution of crops over the total cultivated area which produced a relative increase in the area devoted to crops with higher yields and unit values. Thus, corn declined from 71% of the harvested area in 1939, to 66% in 1945-1949, and 65% in 1950. On the other hand, the harvested area for cotton rose from 3.8% of the total in 1939 to 5.1% in 1945-1949 and 8.5% in 1950. Similarly the harvested area for oilseeds increased from 1.4% of the total in 1939, to 2.9% in 1945-1949, and 3.3% in 1950 (Table 41).

These changes in the crop pattern were responsible for 60% of the rise in agricultural production in 1940-1944 and therefore had more effect on output than the increase in harvested area or than the higher yields per hectare; in 1945-1949, such changes accounted for 32%, and in 1950 they were only of minor importance compared with the other two factors (Table 51).

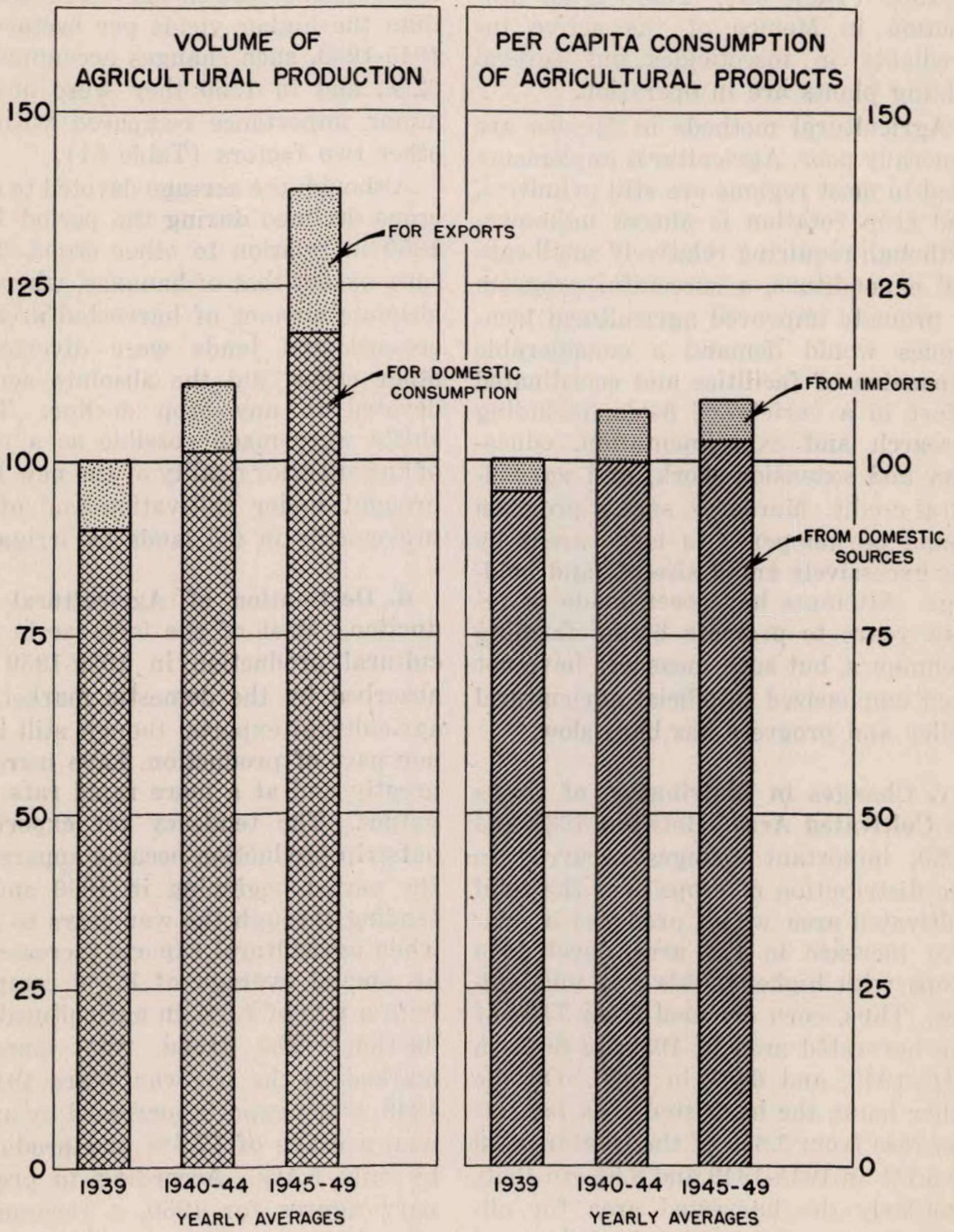
Although the acreage devoted to some crops declined during the period 1939-1950 in relation to other crops, in no case, except that of bananas, where the absolute amount of harvested area decreased and lands were diverted to other crops, did the absolute acreage devoted to any crop decline. These shifts were made possible as a result of the superior quality of the new lands brought under cultivation and of improvements in old lands by irrigation.

d. Destination of Agricultural Production. Most of the increase in agricultural production in 1939-1950 was absorbed by the domestic market, but agricultural exports, though still a minor part of production, have increased greatly and at a more rapid rate than output. The tendency for exports to outstrip production became apparent in the period beginning in 1940 and extending through the war years to 1944, when agricultural exports increased by an annual average of 8.7% compared with a rise of 4.5% in agricultural production. The trend was especially marked in the postwar years 1945 to 1949, when exports increased by an annual average of 17.7% and production by only 5.4%. According to preliminary figures for 1950, a reversal occurred in 1950, when exports increased by 12.1% over 1949 and production by 16.1% (Table 48). As a consequence of

CHART 8

PRODUCTION AND PER CAPITA CONSUMPTION OF AGRICULTURAL PRODUCTS*

(INDEX, 1939=100)



*24 agricultural products.

SOURCE: Combined Mexican Working Party on the basis of data from the Direccion de Economia Rural, Bank of Mexico and the Direccion General de Estadistica.

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the more than proportionate increase in exports relative to output, the volume of agricultural production for export rose from an average of 9% of total agricultural production in 1939-1944 to 15% in 1945-1949 and 19% in 1949-1950 (Table 54 and Chart 8).

The chief reason for the greater increase in exports was the higher rise in postwar prices for export crops like cotton, coffee and oilseeds compared with those of crops produced for home consumption. The unequal increases in domestic and export prices stimulated a proportionally greater rise in the output of export crops and in some cases (e.g., coffee), there was an actual diversion of production from the domestic market to exports. The Government has sought to counteract the effects of the rise in export prices by campaigns to increase the production of food crops for domestic consumption and by directing public agricultural credit towards food crops. However, official policy has also sought to keep down the prices of domestically-consumed food crops. The pursuit of this dual objective during a period of rising export prices has not been very successful in most years. To a great degree, the increase in production for the domestic market in 1950 can be attributed to the effects of public agricultural credit. It is also necessary to remember that official statistics on food production in 1950 are tentative, not only because of their preliminary character, but also because the data on food crop production, always incomplete, may reflect better coverage in that year than in previous years.

Although the shift toward export production was induced mainly by price developments, it was made possible by the rise in private investment and further facilitated and supported by public agricultural investments. The new lands brought under cultivation by public irrigation offered excellent opportunities for growing such crops as cotton and flaxseed, and their use for corn or wheat had become comparatively unprofitable at prevailing prices. In the meantime, modest public expenditures for improving farming methods in the older agricultural regions where domestic food crops are chiefly grown, have influenced output to only a minor degree.

Government policy in recent years has also been directed towards reducing imports of agricultural commodities, the import of which is in most cases a government monopoly. During the war, imports of agricultural commodities increased from the 1939 level of 4.3% of domestic consumption of agricultural products to an annual average of 6.7% in 1940-1944. After the war, as a result of restrictions on imports and the devaluation of the peso, agricultural imports declined, dropping to 4.6% of domestic consumption of agricultural commodities in 1949. However, a considerable increase in wheat imports again raised the ratio to 6.0% in 1950, and in 1951 some corn was also imported (Table 54).

The rapid rise in agricultural exports and the restriction of agricultural imports have combined to reduce the rate of increase of domestic consumption of agricultural products in recent years. As a consequence of the considerable increase in agricultural imports during the war years 1940-1944, domestic consumption expanded at a faster rate, 5.5% on the average, than agricultural production, which averaged an increase of 4.5% annually. In contrast, domestic consumption in 1945-1949 expanded slowly at an average annual rate of 1.9%. Per capita consumption of agricultural products, which had increased annually by an average of 3.2% in 1940-1944 declined by an annual average of 0.9% in the years 1945-1949 (Table 48). The 1945-1949 consumption and production averages were diminished substantially by the unusually poor corn crop in 1949; in 1950, a considerable increase in domestic consumption probably occurred, although the unreliability of data on apparent consumption for 1950, complicated by unusually high wheat imports at the end of the year (which probably included stocks for future consumption) makes it impossible to give an adequate estimate of the increase.

8. *Prospects for Agricultural Development*

During the next ten years, agricultural production could increase as fast as, or faster than, in 1939-1950. Public irrigation investments of the last five years have thus far yielded only a part of their potential, and many opportunities exist for increasing production by further irrigation and by adopting better agricultural methods. As long as these possibilities exist, the adverse effect of soil erosion and deforestation can be postponed.

From figures quoted in 1946 by the present Secretary of Hydraulic Resources, it can be determined that 5 million hectares could be irrigated in dry or semi-dry regions of the country, and that an additional 4 million hectares in humid or semi-humid areas could come under cultivation if adequate drainage facilities, river-regulation or auxiliary irrigation were introduced. Between 1947 and 1950, new and old lands improved by irrigation amounted to only about 370,000 hectares or 4% of the total area which, according to the estimate of the Secretary of Hydraulic Resources, could benefit from irrigation, improved drainage or river-regulation. Even if allowance is made for the fact that the estimate was probably only a crude approximation and that it included lands to which water could be brought only at high cost, the conclusion appears warranted that there remains a large potential area, only partly under cultivation, on which production could be increased by augmenting the supply of water. Moreover, if initial steps taken in recent years to improve farming methods and to promote the use of improved seed and fertilizer are extended and complemented by adequate extension work and agricultural credit, substantial increases in output could result, even though progress in the older agricultural areas may be retarded by the small size of land holdings.

The relatively hopeful prospects for Mexican agriculture may not hold good over a period of more than ten or fifteen years. Irrigation will become increasingly costly and the beneficent effects of improved agricultural techniques may prove to be limited. In these circumstances, the effects of soil erosion and deforestation, which year by year are visibly reducing the area of usable land and jeopardizing the water supply, will be felt with ever-increasing force.

Moreover, although agricultural exports may continue to expand, foreign markets cannot be expected to absorb an ever-increasing proportion of agricultural production at the high rate which has prevailed in recent years. If this is the case, expansion of Mexico's agricultural output would call for a different orientation, with emphasis on a more rapid expansion of production for domestic consumption than in recent years.

B. LIVESTOCK

Largely owing to foot-and-mouth disease and severe drought over a number of years, livestock farming has expanded little in the 1939-1950 period. Investment in livestock declined greatly compared with agricultural investment, and the number of heads increased by an annual average of only 0.9% from 1940 to 1950 (Table 55). No statistics are available on the volume of livestock production, but estimates made by the Combined Mexican Working Party indicate that the volume increased by an annual average of 2.9% in the years 1940 to 1950 (Table 6); this compares with an annual average increase of 5.7% in agricultural production in the same period.

In contrast with investment and output, the demand for cattle has been growing greatly, as a consequence of increased urbanization and higher incomes. A more rapid expansion of livestock farming is likely than in the past decade, unless droughts persist or foot-and-mouth disease, which is now under control, again becomes a problem. There are considerable potentialities for expanding cattle raising in parts of the country less liable to droughts than the north, where cattle raising and meat packing have hitherto been concentrated.

Any move to expand cattle farming in these areas, however, might require the establishment of packing plants. Unless special measures are taken, lack of credit facilities also may be expected to impede expansion. For all practical purposes, it may be said that at present government banks do not make loans for animal husbandry. Loans for this purpose by private banks, while increasing in recent years, remain insignificant in relation to livestock production; in 1949, for example, they were equivalent to less than 4% of the total value of livestock produced.

C. FORESTRY

Such data as are available indicate that production of lumber and other forestry products in Mexico approximately doubled in volume between 1941 and 1949 (Table 56). Exports of lumber also have increased substantially, reaching 71 million pesos ($8.2 million) in 1950, compared with 2 million pesos ($0.4 million) in 1939.

The overriding problem of Mexican forestry, however, is not production but reforestation and conservation of remaining forest resources. Somewhat belatedly, laws for the protection of forests have been broadened in recent years and their enforcement intensified. Some reforestation (on which no statistical data exist) has been carried out by private enterprises engaged in lumber and pulp production, but government expenditures for this purpose are still low. However, an official reforestation program has been announced for 1952 according to which 200 million seedlings will be planted at an estimated cost of 20 million pesos.

Expansion of the output of forestry products is by no means incompatible with conservation. There exist richly-forested areas within the country, particularly in the tropics, which are almost untouched; but in other areas where deforestation has been advancing, often alarmingly, the major problem is the substitution of scientific forestry for unrestricted and haphazard exploitation.

D. FISHERIES

The Mexican fish catch has increased at an average rate of 13% from 1940 to 1949 (Table 57), but is likely to increase much more slowly in the future because of reduced supplies of the main export species and the slow expansion of the domestic market.

The most important development in Mexican fisheries since 1940 has been the great increase in the shrimp and sardine hauls, which now account for more than half the total catch. The shrimp catch, most of which is exported, rose from 5,100 metric tons in 1940 to 18,500 metric tons in 1949, while the sardine catch, which is consumed almost entirely within the country, increased from 2,700 metric tons to 18,700 tons in the same period (Table 57). The catch of other species, sold mainly in the domestic market without previous processing, more than doubled between 1940 and 1945, but has decreased somewhat since then because of the concentration on shrimp and sardine by fisheries located on the Gulf of California and in Lower California.

The increase in the size of the catch was made possible by an expansion of the Mexican fishing fleet from 7,900 tons in 1941 to 23,500 tons in 1949 (Table 58) and by the establishment of a fish canning and freezing industry which in 1950 included 68 enterprises, mainly for processing shrimp and sardine. These are located for the most part on the Gulf of California and in Lower California.

Fish exports, principally shrimp and relatively small amounts of abalone and lobster, have increased from 8,200 metric tons and 7 million pesos ($1.3 million) in 1940 to 22,900 tons and 163 million pesos ($20.3 million) in 1949 (Tables 59 and 133). In both years, exports were equivalent to about one-third of the total production.

Although the U. S. market could absorb more Mexican shrimp and abalone at remunerative prices, there is no outlook for a substantial expansion of these exports because of the scarcity of these species. The shrimp catch in the Gulf of California, the main producing center, has been declining greatly in the 1950-1951 and 1951-1952 seasons. It is possible, nevertheless, that the adoption of conservation methods, towards which some recent measures have been directed, could raise the catch again to former or even somewhat higher levels. New fishing areas are being opened near Mazatlan and Salina Cruz on the Pacific Coast and further expansion in Campeche on the Mexican Gulf Coast is possible. Increased production in these regions could compensate for the decline in the Gulf of California area and allow for some increase over the 1949 level if production in the Gulf of California again increases. There seems to be no possibility of expanding the haul of the finer type of abalone now being taken, and prices are much lower for the other available types.

Nor are the prospects bright for developing exports of fish not now exported. The output of sardines could be increased substantially even with existing equipment and facilities, but exports to the United States are hampered by the high protective tariff against sardine imports into that country. Fishing for tuna on the high seas, now carried on almost exclusively by American boats fishing off the Pacific

Coast, would require a basic reorientation of the Mexican fishing industry and considerable new investment. A Mexican tuna fishing industry must also expect to encounter difficulties competing with the tuna fishing industries of other countries because the requirements of Mexican labor laws would result in high operating costs. Moreover, it can be assumed that the United States, the only major market, would take whatever steps may be necessary to protect its own tuna fishing industry if confronted with increased supplies of tuna from abroad. On the whole, therefore, it is improbable that the volume of fish and seafood exports from Mexico will continue to expand at more than a slight increase over the present level.

In view of the not too favorable outlook for exports, the best opportunity for expanding Mexican fisheries therefore lies in production for the domestic market. Although a remarkable increase in the consumption of fish occurred during the war, when consumption more than doubled in five years, the amount of fish products consumed in the country is still at the low annual level of less than 2 kilograms per inhabitant, and the level of consumption has been almost stationary since 1946 (Table 59). There are no imminent limitations on the supply of fish for species consumed in the domestic market; however, the low level of incomes, inadequate facilities for transporting and handling fish and an inefficient distribution system operating with high margins seriously restrict the local market and the possibilities for expansion.

CHAPTER III

Mining

A. INVESTMENT

In spite of high prices for industrial metals during most of 1939-1950, mining investments have been low and have declined in relation to other investments. Transportation deficiencies and the system of public taxation have deterred investment for extraction of low-grade ores remaining in old mining areas, while lack of exploration, transportation and power facilities in unexploited regions where deposits may exist, as well as the tax structure, have prevented investment for the development of new mining areas.

Although it has not been possible to estimate total investment in Mexican mining for 1939-1950, detailed information is available on foreign direct investments in the industry (Table 14). As a measure of total mining investment, foreign direct investment in mining is too low because such statistics exclude Mexican investments and deduct from total foreign direct investment transfers of ownership of foreign properties to Mexicans. Between 1939 and 1950, a certain amount of Mexican investments were made in small smelters and mines, and some transfers of mining properties from foreigners to Mexicans took place. Neither the Mexican investments nor the transfers, however, were of great importance and as almost all the large mining companies are foreign it is safe to assume that the data on foreign direct investment cover a high proportion of the total investment in the Mexican mining industry.

Between 1939 and 1949, foreign direct investments in mining, including reinvested earnings but not intercompany accounts, averaged \$2.3 million annually (12.7 million pesos at current exchange). Average annual investments of \$2.6 million (15.6 million pesos) in the postwar years 1945-1949 were only slightly higher than the average of \$2.1 million (10.3 million pesos) in 1939-1944. (Table 14). Investments during the 1939-1950 period were almost entirely limited to reinvested earnings of existing mining companies and only a small part of the total was in the form of new money entering the country or coming from new foreign enterprises.

During the war years, when other foreign direct investment was kept low by shortages of capital goods, investments in mining were an important part of total foreign direct investment, accounting for 25% of such investments in 1939-1944. On the other hand, in the postwar years 1945-1949, with foreign investments in industry and commerce rising and mining investments almost static, investments in mining were only 9% of over-all foreign direct investments.

Compared with total gross investment, foreign direct investment in mining has been almost negligible between

1939 and 1950, and has shown a pronounced tendency to decline in recent years. For the period 1939-1944, foreign direct investment in mining was 0.9% of gross investment; in 1945-1949, the corresponding ratio was only 0.4% (Table 15). Because of the probable high proportion of foreign investments in mining to the total, the conclusion is warranted that mining investments since 1939 have been at low levels and have declined in relation to investment in other fields.

Such investments as have been made in the mining industry have been confined primarily to plants for processing low-grade ores, slags and by-products. These investments were induced by high prices for industrial metals, but additional investment has been made unattractive compared with other investments in Mexico, as well as with mining investment in most other countries, by heavy taxation and deficiencies of the railways. It is illustrative of the effect of transportation difficulties on mining activities that in October 1951, as much as 190,000 metric tons of minerals, valued at 400 million pesos (about one-fifth of the total value of mineral production in 1950) had piled up at the mines because the railroads were unable to move accumulated stocks to smelters and exporting centers. As a consequence, production had to be curtailed in many mines and some shutdowns were reported.

Although known high-grade ores are seriously depleted, few investments have been made to develop new sources. There are believed to be reserves of both high and low-grade ores of most metals in relatively unexploited regions, especially in the mountains of the west coast and in the southwestern part of the country. Although preliminary geological investigations of these areas have shown promising results, additional surveys are required to determine the extent and quality of the new deposits. However, even if these reserves were proved, they could not be developed without transportation and power.

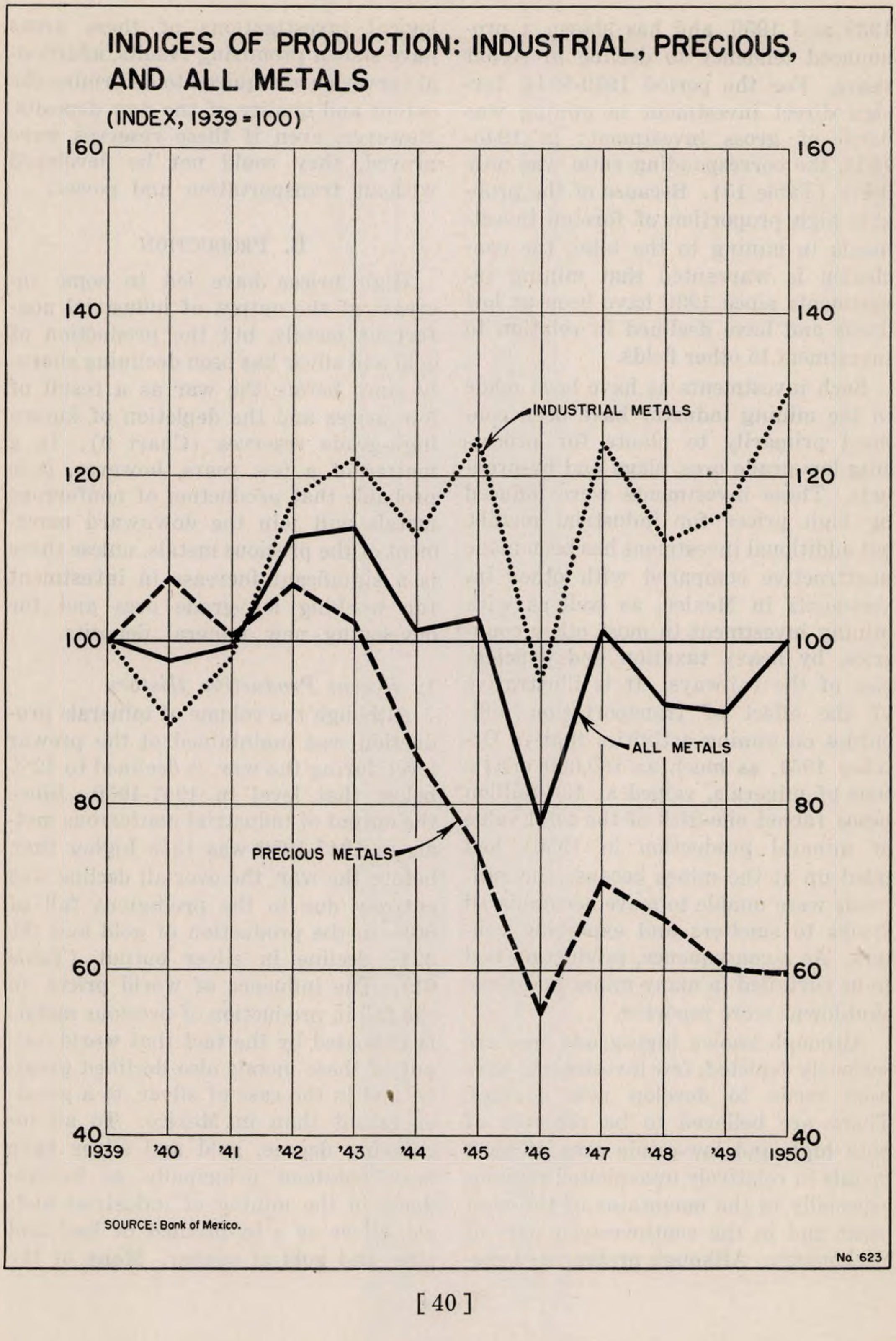
B. PRODUCTION

High prices have led to some increase of the output of industrial nonferrous metals, but the production of gold and silver has been declining sharply since before the war as a result of low prices and the depletion of known high-grade reserves (Chart 9). In a matter of a few years, however, it is probable that production of nonferrous metals will join the downward movement of the precious metals, unless there is a significant increase in investment for working low-grade ores and for developing new mineral deposits.

1. *Recent Production History*

Although the volume of minerals production was maintained at the prewar level during the war, it declined to 12% below that level in 1947-1950. Since the output of industrial nonferrous metals in 1947-1950 was 13% higher than before the war, the over-all decline was entirely due to the prodigious fall of 50% in the production of gold and the 32% decline in silver output (Table 61). The influence of world prices on the fall in production of precious metals is indicated by the fact that world output of these metals also declined greatly, and in the case of silver, to a greater extent than in Mexico. To an increasing degree, gold and silver have been obtained principally as by-products in the mining of industrial metals, silver as a by-product of lead and zinc, and gold of copper. Many of the

CHART 9



INDICES OF PRODUCTION: INDUSTRIAL, PRECIOUS, AND ALL METALS

(INDEX, 1939 = 100)

SOURCE: Bank of Mexico.

No. 623

mines which were being worked principally for their silver have been closed; others are now being exploited chiefly for lead and zinc.

As a group, industrial nonferrous metals have shown a fairly continuous increase in output averaging 1.7% annually in 1939-1950, although there were significant differences in the production of different metals. The output of lead has been below prewar levels during most of the period, but production of the two other important metals, zinc and copper, has increased considerably. Other metals, which are relatively less important, follow a general pattern of greatly increased production during the war and a decline to prewar levels after the end of the conflict (Table 61).

Production of lead reached a peak in 1938 with an output of 287,000 metric tons, although the annual average for the three prewar years 1936-1939 was only 239,000 tons. During the war years 1940-1945, annual lead production averaged 18% below the 1936-1939 level; in the period 1947-1950, production recovered to an average only 6% below the prewar level and in 1950, to 2% above that level (Tables 60 and 61).

The main reason for these changes in production can be found in changes in prices for lead and in price relations between lead and zinc, although lead production also has been adversely affected to an even greater extent than other metals by transportation difficulties and labor problems. During the war, lead prices increased only moderately and to a much lesser extent than zinc prices. High-grade lead ores were being exhausted in many mines, and greater emphasis was being placed on the mining of zinc. After the war, the price for lead increased greatly, and considerably more than that of zinc. The working of lower-grade ores then became profitable and lead production increased at a more rapid pace than zinc production.

Of the three important nonferrous metals, zinc is the only one which reached its highest recorded levels during the 1939-1950 period. Between 1940 and 1945, production was 18% above prewar; after the war, output increased only slightly but, in 1950, it rose by 24% over the previous year to a level 45% above prewar (Tables 60 and 61). Improved prices were the key to increased output, in part because they stimulated the installation of better means of extracting zinc through flotation.

Mexican copper production reached its peak in 1929 with an output of 80,600 metric tons; by 1936-1939, however, production had declined to an average of only 40,100 tons annually. A total of 62,000 tons, 54% above prewar, was produced in 1945, since then output has been stabilized at about that level (Tables 60 and 61). The increase in production since 1936-1939 is almost entirely attributable to the Anaconda Copper Company plant for treating low-grade ores, constructed with the financial aid of the U.S. Government at Cananea, Sonora and placed in operation in 1945.

Other industrial nonferrous metals (cadmium, antimony, bismuth, arsenic, manganese, mercury, tin, tungsten, molybdenum) together with the mineral graphite have accounted for from 5 to 10% of the total value of Mexican mineral production since 1939 (Table 60). Production of most of these minerals increased greatly during the war, the volume of output of the group as a whole reaching a level averaging 58% above prewar in the years 1940 to 1945. After the war, production of this group declined to the prewar level and was 10% below that point in 1950 (Table 61).

Production of iron ore since 1939 has increased much more than the output of any mineral except manganese. Compared with 1939, production had risen by 47% in 1940-1945 and by 188% in 1947-1950 (Table 61). Although the expansion of production was followed by an increase of exports, the importance of these exports for the Mexican economy is small (iron exports in 1950 were valued at only 5 million pesos, about $580,000) and the mining of iron ore is important mainly for the domestic iron and steel industry.

Production of sulphur has been small in Mexico and until recently was limited to meeting domestic needs. As a consequence of the world sulphur shortage, however, investments for producing the mineral are being made by both Mexican and foreign companies, and a considerable increase in output and exports is expected in the next few years.

With the exception of iron, industrial metals are produced mostly for export. Although domestic consumption of nonferrous metals has been increasing, in most cases it is still inappreciable compared to total production. Of the major industrial nonferrous metals, copper is the only one for which domestic consumption has risen significantly since 1939. Apparent consumption of copper (production plus imports minus exports) increased from 5% of production in 1939-1944 to 17% of output in 1945-1950 (Tables 60 and 62) as a result of the establishment of a copper refinery (Cobre de Mexico, S.A.) in 1946 and the production of copper wire by the Consolidada plant.

2. *Production Prospects*

The outlook for future mineral production in Mexico will be determined by world metal prices, the domestic transportation situation and the extent of new investments in mining. Although 1951 lead and zinc prices are likely to decline, increasing dependence of the United States on imports of industrial nonferrous metals may keep their prices high even when the Korean emergency is over. Even so, any big increase in Mexican production would be prevented by the exhaustion of reserves, poor transportation and the reluctance to invest. Under exceptionally favorable circumstances, production could be increased for a time above recent levels by working mines more intensively and by opening up small mines. In the long run, however, production will decline unless new resources are developed, and low-grade ores exploited more fully through greater investment.

For the precious metals, there is little prospect that prices will rise to a point which would make the mining of these metals profitable over an extended period, except as by-products of nonferrous metals production. On the other hand, as long as the output of industrial metals continues at recent levels, production of gold and silver should not decrease appreciably.

C. OFFICIAL POLICY

Whatever the aim of official policy, its chief effect has been to discourage new investment in the industry. The negative results of this policy are now apparent in the creeping stagnation overtaking the Mexican mining industry. The tax system and inadequate transportation facilities, as well as lack of power facilities in some areas, have kept investment at low levels. As known high-grade ore reserves are depleted, the effects of this state of affairs upon production are becoming apparent. In the case of the precious metals, unfavorable price developments already have brought a decline in production and there can be little question that in the next few years the same fate awaits the other nonferrous metals. Mining has accounted for only 2 or 3% of the national income in recent years, but any appreciable further decline in the industry would have serious effects because mining furnishes over one-third of the total value of exports and from 5 to 10% of tax receipts (Tables 3, 63, 115 and 130).

Federal production taxes on minerals, which acquired their present form mainly in 1924, are especially progressive with increasing selling prices in the case of silver, copper, lead, zinc and mercury. For other metals, low flat rates ranging from 1 to 3% of nominal selling prices are applicable, except for gold where a special tax is in effect. In addition to federal production taxes, mining companies pay local production taxes (which are of minor importance), a federal income tax equivalent to 20 to 30% of remaining profits for companies with earnings in excess of 500,000 pesos per annum, and a so-called dividends tax which amounts to 8% of 85% of the remaining profits (Table 63). Since 1949, an excess profits tax (which is relatively unimportant for the mining industry) has also been in effect. The federal and local production taxes are special imposts on the mining industry, the remaining taxes have general applicability to all parts of the economy.

For the four years for which estimates of mining profits are available (1939, 1944, 1946 and 1949), taxes on mining, excluding the excess profits tax, took about 50 to 60% of profits, the highest proportion (63%) being in 1944 and 1946 and the lowest (49%) in 1949 (Table 63). Compared with industry and commerce, where the combined effect of the income, dividends and excess profits taxes take at the most only 30 to 40% of profits, the public share of mining industry profits is high.

Since the high mining taxes apply to domestic as well as foreign companies, Mexican investors have found mining less attractive than investments in other fields. Most of the small mines are operated by Mexicans, whose weak bargaining position makes it possible for refineries to pay low prices for their ore and to shift export taxes to them. For foreign mining companies, the choice has been between increasing investments in Mexico and in other mining countries. The Combined Mexican Working Party has not been in a position to compare Mexican mining taxes and production costs with mining taxes and production costs in other countries. However, Mexican mining taxes are generally considered to be higher than those of most other mining countries, although the difference has been narrowing in recent years.

Where foreign mining companies have increased their investments in Mexico, it has usually been by reinvesting profits. However, Mexican tax laws make no distinction between earnings reinvested and those sent abroad, and there is little inducement under ordinary circumstances for mining companies to increase reinvestment of their profits.

Profits after taxes retained by mining companies operating in Mexico have been rising, particularly after the devaluation of the peso in 1948 and 1949. Such earnings, as a ratio of foreign mining investments, increased from 5% in 1939 to 9% in 1944, 14% in 1946 and 28% in 1949 (Table 63). In spite of this increase, the mining industry compares unfavorably with other economic activities in Mexico and with mining in other countries.

By making it unprofitable to work high-cost mines, the system of taxes based on production depresses investment as well as output. The effect of these taxes increases as high-grade ores are depleted, and leads to the abandonment of mines while they still contain substantial reserves of low-grade ores. The adverse effects of production taxes on output and on the future of the industry are universally recognized, but the ease with which income taxes could be evaded has been a sufficient reason to keep the government from replacing the production taxes by taxes on income.

Some measures have been taken, mostly in recent years, to counteract the harmful effects of the tax system on mining activities, especially in the case of operations of small mining firms. New mines opened in undeveloped areas are given reductions in production taxes for a period of five years and (since recently) subsidies in the form of tax reductions have been allowed to all small mines and smelters. However, the tax reductions for mines in undeveloped areas have proved to be of minor importance in stimulating investment in the new mining regions because of the lack of transportation and power facilities in these areas, and tax subsidies for small mines and smelters are of little consequence for the industry as a whole, which is based primarily on large-scale operations.

Recently the Mexican Government itself entered the mining industry when it acquired title to an important mine, the Real del Monte in Pachuca. The previous owner, a foreign company anticipating the imminent closing of the mine because of depletion of its high-grade ores, offered to transfer the mine to the Government, and the Government accepted the offer in order to prevent a shutdown and consequent unemployment. After the property was acquired by the Government, an increase in world prices made it possible to work the mine's low-grade reserves profitably with a reconstructed flotation plant, and for the time being at least, the mine is being operated on a satisfactory financial basis.

The acquisition of the Real del Monte by the Government cannot be said to signify that the Mexican Government plans to enter directly into mining operations on a large scale, and it can be assumed that the Government took the mine over only to maintain employment in the area. It is not improbable, however, that similar situations will recur with similar results, in view of the steady decline in ore reserves in existing mining areas and the low level of investment in old and new mining regions. In 1951, legislation was enacted providing for reorganization of the Comision de Fomento Minero which envisages a more active role in mining exploration and exploitation for this public agency.

The rehabilitation of the railroad system and the extension of railroad, highway and power facilities are of prime importance in stimulating new investment for the extraction of low-grade ores in older mining districts and, more especially, for the development of new mining regions. Some government-subsidized highways have recently been built to serve the mines, but recent extensions of the railways have not taken adequate account of the needs of the mining industry and little has been done to provide power in new mining areas.

Lack of thorough exploration has deterred the development of new mineral deposits; nor is there sufficient information about reserves in the older mining areas which could be used as a basis for formulating a workable overall policy for the mining industry. This lack of data has been recognized more clearly in recent years. The Ministry of Economy has begun to gather information on reserves while an Institute for Research of Mineral Resources has been established to explore mining resources. However, the work of the Institute is only beginning and the one million pesos allowed the new organization each year is too small a sum to accomplish what is required to be done. Also the activities of the new Institute have to be better coordinated with the work of other official agencies, like the Comision de Fomento Minero and the Office of Industrial Research of the Bank of Mexico, which are also working in the mining field.

While a number of reasons can be given for the uncertain outlook for Mexican mining, the basic cause as well as the hope for improvement lie in the same direction: official policy. As high-grade ore reserves are depleted and investors shun the industry, it is becoming more urgent to review the official mining policy and to formulate a program which will stimulate the industry's development. Even if such a program already existed, it would take years to put it into effect. In the absence of a progressive official policy, the threat to employment, exports and public revenues becomes all the more pressing.

CHAPTER IV

Petroleum

A. PATTERN OF INVESTMENT

Nationalization of petroleum production in 1938 and rapid industrialization since, have diverted the Mexican oil industry from exports towards the domestic market. Before 1938, most petroleum produced in Mexico was exported in the crude form. Domestic consumption of petroleum was relatively low, averaging about 17 million bbls. a year from 1921 to 1937, and showing no perceptible tendency to increase. The few existing refineries, which had a combined capacity well below the country's oil production, were located on the coast to facilitate export, and no pipelines connected oil-producing areas with consumption centers in the interior.

The rapid development of highway transportation, electric power and industry since the late thirties has created an ever-growing domestic demand for petroleum products which it has been the task of Petroleos Mexicanos (Pemex), the government petroleum agency, to meet by increasing the production of crude oil and creating refining and distribution facilities.

Because of the difficulty in obtaining supplies abroad, as well as its weak financial position, investments by Pemex in the first years of its existence were small. Between 1938 and 1944, such investments averaged 30 million pesos annually, excluding ordinary maintenance and repairs, for which information is not available. Since 1945, however, rising operating surpluses have permitted large and increasing investments. These averaged 145 million pesos annually between 1945-1949, and in 1950 rose to a peak of 398 million pesos, an increase of more than 60% over the previous year (Table 64). Figures of investment since 1947 are considerably inflated by the effects of the peso devaluation of 1948-1949. Information is lacking which would permit a comparison of investment by Pemex in real terms over the period 1938-1950, but it is clear that real investment has increased several times.

1. *Composition of Investment*

Pemex's investment has been governed, on the one hand, by the urgent needs of the domestic market and, on the other, by its limited financial resources. Most of its investments have been in refineries, the expansion of facilities for transporting petroleum, and increasing the production of crude oil from existing oilfields. Refineries absorbed the major share of Pemex investments in the years 1945-1948, and refining capacity rose by 91% from 117,500 bbls. per working day in 1938 to 224,000 bbls. in 1950 (Table 65). Most of the increased capacity was in the reconstructed Atzcapotzalco refinery in the Federal District and the new refinery at Salamanca in the State of Guanajuato, both of which serve the main region of industry and population in the central part of the country. Since many of the existing refineries were located on the coasts, far from domestic centers, refining capacity had to be increased at a greater rate than production. Largely for this reason, refineries were working at only 70% of capacity in 1950.

In addition to building refineries, pipelines were laid connecting Poza Rica with Atzcapotzalco (in 1939-1940) and Salamanca (in 1949-1950). Including smaller pipelines, the length of oil pipelines has been extended by 48% from 1,717 kilometers in 1938 to 2,539 kilometers in 1950 and pipeline carrying capacity by 43% from 664,000 bbls. per day to 948,000 bbls. (Table 65).

Besides considerable increases in the number and capacity of tank cars, tank trucks and storage tanks, the natural gas pipeline system was also extended between 1947 and 1950 from 372 kilometers to 819 kilometers, and its capacity increased from 100 million to 510 million cubic feet per day, mainly as a result of the construction of a new gas line connecting Mexico City with the Poza Rica Field (Table 65). Before 1938, most of the tankers used to export petroleum were owned by foreign firms other than expropriated companies and Pemex took over only one large tanker when the industry was nationalized. Subsequently, large sums of money were spent in acquiring a tanker fleet, which in 1950 had a capacity of 1,453,000 bbls., and mainly comprised 18 large tankers (Tables 64 and 65). The size of the fleet is even greater now, since further additions to the fleet were made in 1951.

In contrast to expenditures for refineries, investment in oilfields and in drilling of wells did not reach substantial levels until 1948. In 1947, funds spent on oilfields amounted to only 18 million pesos, but such investments had risen to 164 million pesos by 1950; in the same interval investments in drilling increased from 14 million pesos to 84 million (Table 64). The number of drilling rigs owned by Pemex rose from 19 in 1938 and 33 in 1948 to 116 in 1951, while the number of wells drilled, which had averaged only 27 annually in 1938-1944, increased considerably after 1947, reaching 223 in 1950 (Table 65).

Investments in oilfields and drilling were directed primarily towards increasing the supply of crude oil as quickly as possible in order to meet the rapidly rising domestic demand for petroleum products. This explains why, out of the 567 wells sunk between 1946 and 1950, 80% were developmental and only 20% exploratory. Continued rise of consumption in the last few years has forced Pemex to intensify its developmental drilling each year at the further expense of exploratory drilling. Thus, the number of exploratory wells sunk declined from 38 in 1948 to 17 in 1950, in spite of the fact that the total number of drillings was increasing simultaneously (Table 65). Even foreign contractors who are drilling in Mexico under agreements with Pemex are working mainly in known oil fields.

The low level of drilling operations goes back beyond 1938 to the late nineteen twenties, when foreign petroleum companies with concessions in Mexico began to curtail their investments. The number of wells drilled had reached a peak of 808 in 1926, but a decline set in thereafter until only 133 new wells were drilled in 1930 and only 45 in 1937. The Mexican petroleum industry, therefore, is now suffering the effects of a low level of drilling over a period of more than 20 years.

The Combined Mexican Working Party has not obtained detailed data on Pemex's investments during 1951. Available information indicates, however, that investment expenditures in that year did not differ significantly, either in amount or composition, from investments made in 1950. The construction of pipelines and the acquisition of tankers continued to absorb important sums, and the number of wells drilled, while increasing from 223 in 1950 to 275, showed a smaller absolute and proportional rise than in either 1949 or 1950.

Nor do published accounts of the 1952 investment program reveal major deviations from the past. Planned investment in 1952 will amount to 400 million pesos, which in real terms is probably below the 374 million pesos spent in 1950. No details have been revealed of the distribution of the proposed expenditure, but press announcements indicate that while refineries and pipelines will continue to be the most important categories, the number of wells to be drilled is expected to rise to 400. Although the drilling of such a quantity of wells would represent a substantial increase over similar operations in previous years, it cannot be said to signify a basic change in the Pemex investment pattern. Moreover, Pemex is having difficulty obtaining equipment and supplies from the United States which may interfere with future programs.

2. *Financing Investment*

Pemex's investments have mainly been financed from its own operating surpluses. For the entire period 1938-1950, 87% of the investments made by Pemex were financed from its own funds. The remaining 13% were composed of domestic loans (6%) floated in 1946, an Export-Import Bank loan (4%) utilized in 1945-1946 and the financing of drilling by American contractors (3%) in 1948-1950 (Table 64).

Far from being the recipient of substantial sums for investment from outside sources, Pemex is in fact, an important source of tax revenues to the Government and of subsidies to official agencies. Tax payments, including petroleum consumption taxes, have taken 27.6% of the Company's total gross receipts in 1938-1950.

Pemex also has granted subsidies in the form of reduced prices to other government agencies, principally the National Railways and, more recently, the fertilizer plant at Cuautitlan. On the basis of the Pemex estimate that such subsidies cost 160 million pesos in 1950, tax payments and subsidies accounted for 33% of the Company's gross receipts in that year. In addition to tax and subsidy payments, Pemex has assumed responsibility for the service of the petroleum nationalization debts. It is noteworthy also that Pemex pays wages which are among the highest in Mexico and that it has a price policy which keeps the cost to consumers at moderate levels.

B. PRODUCTION, CONSUMPTION AND DISTRIBUTION

By concentrating on projects which yield quick results, Pemex has been able, in spite of insufficient funds, to keep pace with the domestic demand for oil, to improve internal oil transportation facilities and to avoid net imports of refined petroleum products.

In 1937, the year preceding nationalization, crude oil production amounted to 47 million bbls., approximately one-quarter of the peak output of 193 million bbls. in 1921. Until 1946, output was relatively stationary at 1937 levels; thereafter, increasing investments in oil fields and drilling made it possible for production to rise by an average of 10.7% annually between 1946 and 1950, and in 1950 by a spectacular 18.9% over the preceding year to a total of 72 million bbls. (Table 66).

During the same years, 1946-1950, consumption expanded by an average of 10.1% annually. Because of low increase in production prior to 1946, however, the average annual increase in domestic consumption for the entire period 1939-1950 rose at a much faster rate than production (9.1% compared with only 4.9%) so that the demand for petroleum over the entire period could be satisfied only by a reduction of exports. The export surplus, which averaged some 14 million bbls. annually in 1938-1941, dropped to 4.5 million bbls. in 1942-1945. The considerable increase in production after 1945, however, again raised the export surplus to an average of 10.2 million bbls. annually in 1946-1950 (Table 66).

Increased consumption also outstripped the increase in refined petroleum output, which rose annually by an average of 4.6% in 1940-1945 and by 6.1% in 1946-1950. Consequently, and in spite of high investments for expanding refining capacity, imports of refined petroleum have increased until the export surplus of refined oil in volume terms all but disappeared by 1950 (Table 66).

The transportation of petroleum in the central region of the country has improved considerably since the completion of oil pipelines to the refineries in Mexico City and Salamanca. Extension of pipelines from the refineries to the main consumption centers is included in present investment plans, but for other areas of the country the railroads continue to be the principal means of transporting petroleum. The poor condition of the railroads, however, has seriously hindered the movement of oil. In the case of tank cars, for example, new acquisitions increased total capacity for hauling petroleum by 163% from 1938 to 1950, but the expansion was partially offset by a 21% reduction in the average speed of railroad trains in the same period.

Distribution of petroleum to the Pacific Coast and northwestern regions of the country via the railroads has met with special difficulties and these areas have had to be supplied in large part from the United States. A step in arriving at an efficient solution of the distribution problem to these regions was taken in 1950-1951 with the construction of an oil pipeline across the Isthmus of Tehuantepec from the Minatitlan refinery to the harbor of Salina Cruz.

C. PRODUCTION PROSPECTS

Increased production of crude oil between 1945 and 1950 was achieved with comparatively small outlays for drilling largely because of the favorable geologic structure and undeveloped condition of Poza Rica. This field had been discovered in 1930, and although exploration before nationalization had revealed that the main part of Mexico's proven oil reserves were located there, output prior to 1946 had remained low. The nature of the subsoil in the area also made drilling inexpensive and increased the proportion of productive wells which could be obtained from the total drilled. Since 1945, the yield from Poza Rica has more than doubled, and

83% of the total increase in Mexico's crude oil production from 1945 to 1950 came from this field (Table 67).

To allow too rapid a flow from a field may reduce the total amount of oil which can be obtained from the field. In Poza Rica's case, although only a small part of the reserves has so far been extracted, the rate of extraction had risen so high in 1951 that it had to be lowered to insure maximum economic recovery of petroleum from the field. Pemex therefore lowered production at Poza Rica during the first half of 1951 from a daily rate of 145,000 bbls. in January and February to 127,000 bbls. in July. In the second half of the year, however, demands on Pemex for petroleum made it necessary again to raise the level of production considerably.

The reserves of the three other major oil fields in Mexico, the Ebano-Panuco, the Faja de Oro and the Isthmus, have been greatly depleted. In recent years, output from Faja de Oro has been stationary and that of Panuco declining, trends which must be expected to continue in the future. Production in the Isthmus Field has been increasing slightly as a result of drillings which revealed new deposits richer than the older ones. However, no substantial increase in production is likely to come from this field, although some may be expected. The only new field discovered since 1938, the Northeastern Field, is primarily a gas field; its oil production has been negligible, amounting to less than 1% of the country's total petroleum production in 1950 (Table 67).

Although the Working Party was unable to get from Pemex either estimates on future production of crude petroleum or precise data on the current extent and results of exploratory drilling, it is possible to obtain a dependable idea of the outlook for petroleum production from existing information. Pemex hopes to meet future demand by increases in production from three sources: (1) fields in the immediate neighborhood of Poza Rica, (2) newly-discovered fields in Southern Mexico, and (3) natural gas reserves. Most of the recent efforts to find new oil deposits have been made in extensions of the Poza Rica field. This region has an understandable attraction for Pemex in the light of its limited financial resources. Drilling in the region is inexpensive and because of its proximity to Poza Rica, development costs also are lower. However, discoveries in the area up to this time (including the President Aleman Field, Escolin Field, and others) are unlikely to yield an increase in production similar to that obtained from Poza Rica in recent years.

Important oil discoveries were recently made southeast of the Isthmus of Tehuantepec, the best known of these being the Jose Colomo Field in the State of Tabasco. Three wells had been sunk in this field by August 1951 and a pipeline is under construction which will connect the field with the Minatitlan refinery 120 miles distant. The discoveries in Southern Mexico have great potential significance for future production, but before output can be increased substantially and delivered to consumption centers, large numbers of exploratory and developmental wells will have to be sunk and substantial investments made in transportation facilities to carry the oil out of its isolated location. Experience has demonstrated that it takes a long time to develop new fields even under favorable circumstances. If, therefore, the level and composition of future petroleum investments are on the same basis as at present with emphasis on refining and distribution and low expenditures for drilling, it is difficult to foresee how the new areas could make a substantial contribution to production and consumption before the end of five or six years.

On the other hand, new gas discoveries and the completion of gas pipelines in 1947-1950 give indications of real possibilities for increasing the production and productive utilization of natural gas, a commodity which can be substituted for petroleum for some purposes, notably in generating electric power. Between 1946 and 1950, the productive use of gas rose by an annual average of 180 million cubic meters which, 5,000 cubic feet of gas being approximately equal to one barrel of oil, is equivalent to 1.3 million bbls. of petroleum (Table 68). Most of the increase came from Poza Rica, where gas is obtained as a by-product of petroleum production. Moreover, since all of Poza Rica's gas is not being utilized at the present time, some increase in production is to be expected, even if there is no further expansion in the output of oil. The most important rise in gas production, however, is likely to come from the rich gas reserves of the Northeastern Field. In this case also, a considerable investment for drilling wells and laying new pipelines will be necessary to develop the field. Consequently, no great rise in output is to be anticipated soon.

Unless expenditures for exploratory and developmental drilling rise far above their present level, therefore, it is unlikely, in the absence of striking new discoveries, that production will increase as much in the next as in the last five years. In the first six months of 1951, crude oil was being produced at a rate 4.8% higher than in 1950 (Table 66); for the entire year, however, production was estimated to have reached 78.8 million bbls., 8.8% above output in 1950, because Poza Rica's output was again increased in the latter half of the year. The rise in production in 1951 was below the annual average increase of 10.7% in 1946-1950, but probably higher than can be expected in the future, based as it is almost entirely on continued increases of production in a field where extraction already has passed the level of maximum economic recovery. On the basis of all the available evidence, therefore, and on what appears to be a well-founded supposition that Pemex will not increase its drilling rate in the immediate future much above presently-planned levels, increases in petroleum production over the next five years will not exceed 2% per annum. However, on the not improbable assumption that in the next few years the output of natural gas could be expanded by about 300 million cubic meters annually (equivalent to 2.2 million bbls. of oil), the combined production of petroleum and natural gas (in oil equivalent) would rise between 4 and 5% a year between 1952 and 1956.

In contrast with the prospect of a fall in the rate of increase of production, no decline is foreseeable from the average annual rate of 10.1% at which consumption rose in 1946-1950. The pace at which demand for petroleum increases in Mexico is determined primarily by the development of transportation, thermo-electric power and industry. In view of the prospect that highway traffic, the number of tourists using automobiles, the number of diesel-driven locomotives and thermo-electric power and industrial installations will continue to increase, it is not inconceivable that the rate at which consumption has grown in recent years will be exceeded in the next few years. On the most favorable assumptions, however, that production will expand at an annual rate of about 4.5% and consumption no higher than 10.1%, a steady decline will occur over the next five or six years in the production surplus available for export, and a deficit will appear at the end of that time which can only be covered by increased imports (Chart 10).

PETROLEUM AND NATURAL GAS SUPPLIES IN THE EVENT TOTAL PRODUCTION RISES BY AN ANNUAL AVERAGE OF 4.4% FROM 1952 TO 1956 AND CONSUMPTION BY 10.1% FROM 1951 TO 1956

(millions of bbls.)

	1950	1951	1952	1953	1954	1955	1956
Production							
Petroleum	72.4	78.8	79.6	81.2	82.8	84.4	86.1
Gas[2]	—	2.2[1]	4.4	6.6	8.8	11.0	13.2
Total	*72.4*	*81.0*	*84.0*	*87.8*	*91.6*	*95.4*	*99.3*
Consumption	58.5	64.4	70.9	78.1	86.0	94.7	104.3
Surplus or Deficit	13.9	16.6	13.1	9.7	5.6	.7	–5.0

[1] Preliminary.

[2] Increase of 2.2 million bbls. annually in oil equivalent of productive use of natural gas.

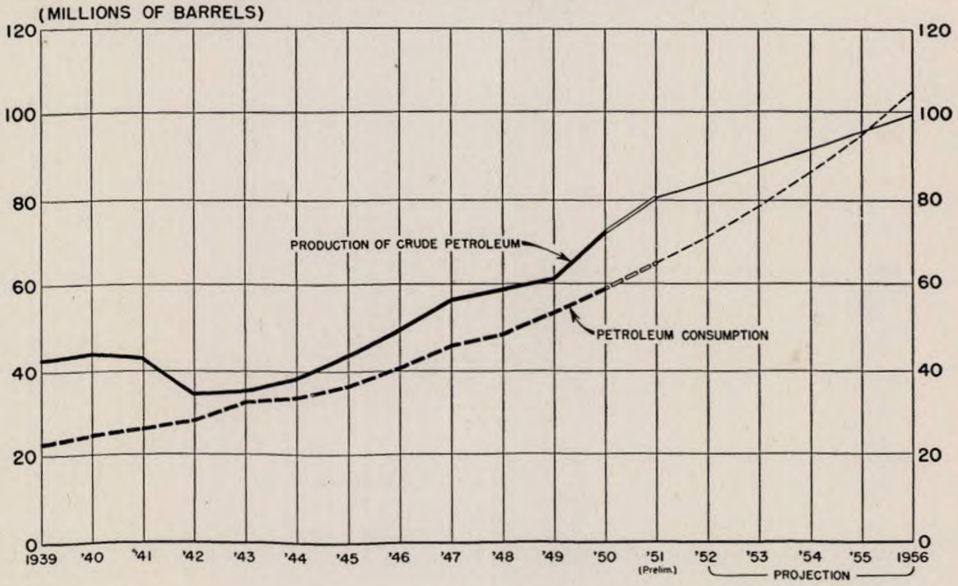
D. IMPLICATIONS FOR FUTURE POLICY

The main Pemex objective in the future, as in the past, must be to provide the increase in production, refining and transportation which can meet the rapidly expanding domestic demand for petroleum. With consumption increasing at 10% per annum, Pemex will have to supply a domestic demand of 104 million bbls. in 1956. To meet this demand without reducing the export surplus, production of crude oil will have to increase by an average of 8.6% each year between 1952 and 1956; refining capacity will have to rise by 110,000 bbls. per working day (assuming utilization of refinery equipment could be raised from the current level of 70% to 85% of capacity); and in addition, a variety of complex distribution problems will have to be solved.

The experience, organization and financial strength which Pemex has acquired since it started operating should make it easier for Pemex to attain its objectives in the future than in the past. On the other hand, Pemex can no longer count on Poza Rica's undeveloped reserves nor on the export surplus of the early nineteen forties which enabled it to meet the needs of the domestic market with low investment expenditures. Barring the possibility of an exceptionally favorable strike, future increases in production can be achieved only at higher costs.

It has become an established and cherished principle that Pemex must finance petroleum investment from its own resources, and this remains the general impression in spite of a recent domestic loan taken by Pemex to establish a lubricant plant at Salamanca. The official policy requiring Pemex to subsidize other government agencies with

CHART 10



PRODUCTION OF CRUDE PETROLEUM AND CONSUMPTION OF PETROLEUM AND PETROLEUM PRODUCTS

(MILLIONS OF BARRELS)

SOURCE: 1939-1950, Pemex; 1951 preliminary figure for production, Pemex, for consumption, an estimate by Combined Mexican Working Party; 1952-1956 projection of Combined Mexican Working Party (increase in production and consumption of natural gas over 1950 included).

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funds which could be used by it for development purposes is also a serious handicap to the Company. It is difficult for Pemex under these conditions to increase refining and transportation capacity and at the same time to raise exploratory and developmental drilling to the required levels.

The Pemex investment program for 1952 provides only a modest increase in the number of wells drilled which could hardly realize the necessary production goal. Nor can drilling by foreign contractors be relied upon to bring Pemex much closer to its objective. For the Mexican economy as a whole, however, the petroleum problem is by no means insoluble or even especially difficult. It is, in essence, a matter of diverting investment to petroleum from less urgent sectors.

CHAPTER V

Electric Power

A. ELECTRIC POWER DEVELOPMENT IN 1939-1950

Mexico has been suffering from a shortage of electric power for many years and in spite of recent increases in generating capacity is likely to do so for some time to come. In the nineteen thirties, the rates set by Government, together with labor difficulties, reduced the income of privately-owned public utilities in relation to costs, and brought about a curtailment of their investments. Although the generating capacity of industrial firms producing power for their own use increased appreciably in consequence, by 1939 the shortage of electric power had become a serious obstacle to industrial growth.

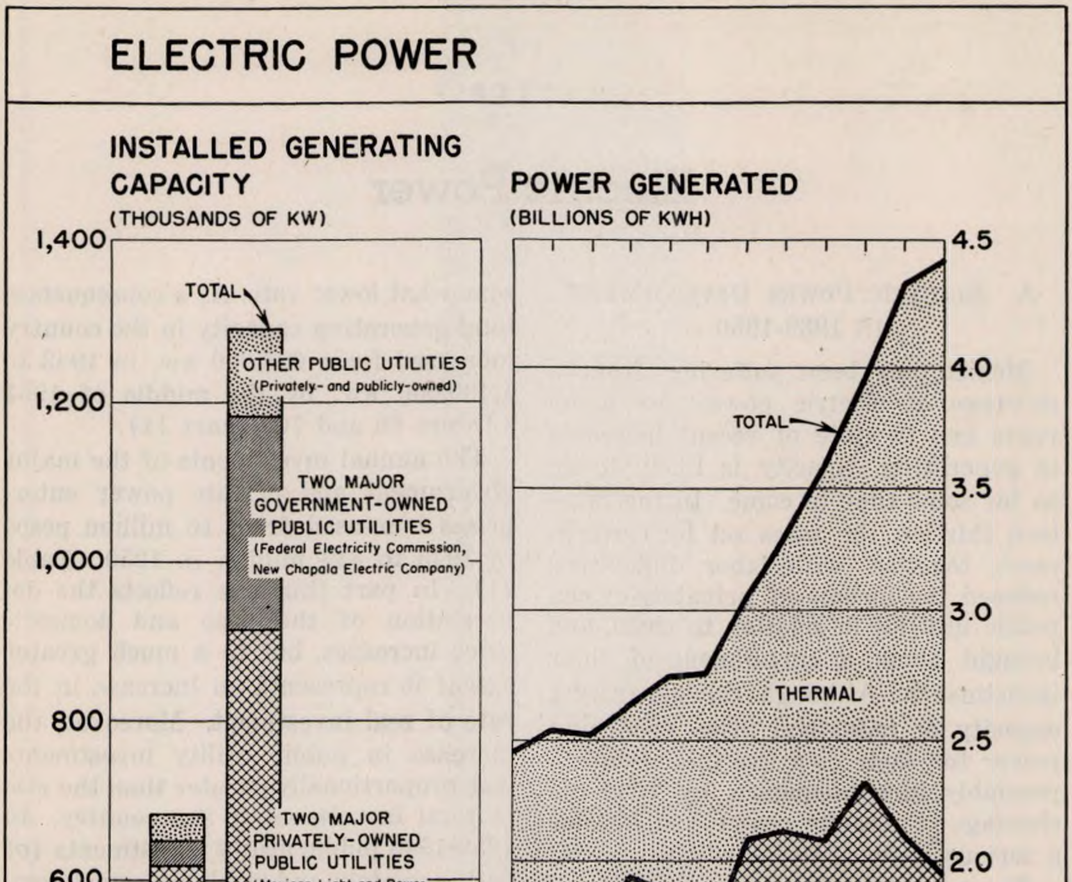
To meet the need for additional power, the Government in 1937 established the Federal Electricity Commission. As a result of a shortage of funds, however, and the difficulty of obtaining generating equipment during the war, no substantial investments were made by the Commission before 1944.

Between 1939 and 1943 the generating capacity of public utilities (both privately and publicly owned) remained unchanged. Beginning in 1944, however, generating facilities began to expand and, by the middle of 1951, their capacity had reached 1,054,000 kw., more than double the 480,000 kw. in 1943. The capacity of industrial plants producing power for their own use, some of which sell excess power to the public, also increased, although at a somewhat lower rate. As a consequence, total generating capacity in the country increased from 680,000 kw. in 1943 to 1,400,000 kw. by the middle of 1951 (Tables 69 and 70, Chart 11).

The annual investments of the major government and private power enterprises increased from 16 million pesos in 1943 to 314 million in 1950 (Table 71). In part this rise reflects the depreciation of the peso and domestic price increases, but to a much greater extent it represents an increase in the rate of real investment. Moreover, the increase in public utility investments was proportionally greater than the rise in total investment in the country. In 1939-1943 public utility investments (of both privately and publicly owned companies) averaged 1.2% of gross domestic investment; this ratio increased to 2.4% in 1944-1948 and to 5.4% in 1949-1950. The increasing importance of power investments in relation to toal investments was chiefly due to the increase of government power investments, although even private power investments increased greatly in recent years (Tables 15 and 71).

The Federal Electricity Commission and the New Electric Company of Chapala (which is under the Commission's control), together with two foreign-owned private companies, the Mexican Light and Power Company and the American and Foreign Power Company, were responsible for 84% of the increase in capacity of Mexican public

CHART 11



SOURCE: Federal Electricity Commission, New Chapala Electric Company, Mexican Light and Power Company, and American and Foreign Power Company.

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utilities from 1944 to 1950. About two-thirds of the investments of these organizations in those years were made by the Federal Electricity Commission and the New Chapala Company, and the remaining third by the two privately-owned utilities. However, about one-third of the amount invested by the privately-owned utilities was provided by loans from governmental agencies, and by loans from the International Bank for Reconstruction and Development guaranteed by the Mexican Government. If these loans, as well as foreign private loans to the government-owned utilities are excluded, the share of private capital in the total investments of the four organizations in the years 1944-1950 was only 22% (Tables 71 to 75).

As a consequence of increased official participation in power development, the proportion of government-owned power capacity has grown considerably. In 1943, 7% of the total installed capacity of all public utilities belonged to the two principal government enterprises, and 86% to the two major privately-owned utilities; in 1950, the two government organizations owned 28% of public utility generating capacity and the share of the two private companies had declined to 60% (Table 69). However, most of the power produced in the plants of the Federal Electricity Commission is distributed by private companies, which are also responsible for most of the investments in distribution facilities.

The power generated by public utilities did not increase in the same degree as generating capacity, largely because a series of severe droughts reduced the output of hydroelectric plants. Thus, while the capacity of both privately and publicly owned public utilities rose by an average of 10.5% annually from 1943 to the middle of 1950, their output of power increased on the average by only 6.7% annually over the same period. The lag in public utility output was partly offset by the more intensive use of equipment in private plants producing electricity for their own use.

Since hydroelectric plants form a greater proportion of the generating capacity of government-owned than of the privately-owned utilities, the water shortage has affected government more than privately-owned plants. In 1950, for example, the Federal Electricity Commission (including the New Electric Company of Chapala) produced only 18% of all the power generated by public utilities, although it owned 28% of the total public utility generating capacity (Table 69).

Despite the lag of production behind capacity, the output of electric power rose substantially. The average annual rise in output in 1943-1950 was 7.1% as compared with 4.6% from 1934 to 1943 (Table 76). Nevertheless, the lack of power development in the thirties, and the rapid increase in the demand for power in the forties, made it impossible for production to meet the requirements for electric power.

No estimates of the demand for electric power, and the rate at which it increases each year, are available for the country as a whole. However, an indication of the probable annual rise in power requirements can be obtained from the rates of growth of some of the more important consumers of electricity. The output of manufacturing industries, the main users of electric power in Mexico, rose at a rate of 8% per annum in 1940-1950, and a similar rate of expansion is to be expected in the future. Consumption of electric power for non-industrial purposes, mainly residential and commercial, has been increasing at an annual rate of 12.5% yearly from 1943 to 1949 (Table 77). In view of the fact that capacity does not meet requirements, it would appear that generating facilities would have to increase at a rate of about 9 or 10% per annum in order to supply the development needs of the country. The expansion in power capacity from 1943 to 1950 fulfilled these requirements, although the beneficial effects of this growth were partly offset by droughts.

The development of Mexico's electric power since 1944 has been mainly for the benefit of the Mexico City area. A great increase in capacity has also occurred in the North Pacific region and the Guadalajara and Acapulco areas. The increase in other regions, although considerable, has been smaller. Forty percent of the total increase in generating capacity from 1943 to the middle of 1951 occurred in the Federal District and in the states of Mexico and Puebla, which produce power for the Mexico City area. As a consequence, the combined share of the Federal District and these two states in the country's total generating capacity rose from 29% in 1943 to 35% in 1951 (Table 70). Apart from notable increases in the Guadalajara and Acapulco areas and, to a less extent, in Sonora and Sinaloa, the share of other parts of the country in the total capacity declined. These changes support other information that while the recent expansion of generating facilities has probably been sufficient to supply most of the demand for power in the central area and in a few other regions, many parts of the country are still in need of additional generating facilities to meet all their requirements.

Although hydroelectric projects predominated among the major public utility plants constructed from 1943 to 1950, the share of thermal production in the total generation of power rose from an average of 33% in 1939-1946 to 56% in 1950 (Table 69 and Chart 11). Data on hydroelectric and thermal capacity have thus far been available only for 1950 and 1951 (when each accounted for one-half the total capacity). Consequently, it is not possible to ascertain the degree to which the rise in output of thermal power was due to increases in capacity or to increases in utilization of capacity. It is known, however, that thermal plants had to be more intensively used from 1943 to 1950 to compensate for effects of drought on hydroelectric output. The low level of utilization of hydroelectric capacity is indicated by the fact that, while the increase in capacity of hydroelectric plants of more than 10,000 kw. between 1943 and the middle of 1950 (188,000 kw.) was equivalent to 31% of total hydroelectric capacity in 1950, the output of power from hydroelectric units rose by only 3% from 1943 to 1950 (Table 69). It is to be expected therefore that the production of hydroelectric power will increase greatly in the future.

B. PROSPECTIVE POWER DEVELOPMENT

The Federal Electricity Commission and the Mexican Light and Power Company are expected to increase their capacity by a total of 350,000 kw. between the middle of 1951 and the end of 1953. This will involve yearly increases of approximately 9% in total generating capacity and 12% in public utility capacity in Mexico as a whole.

However, although the added capacity will substantially relieve overloading in some areas, especially around the capital, it cannot be expected to meet the increases in demand in other areas.

Almost all expansion of public utility capacity in the next few years is likely to come from projects of the Federal Electricity Commission and the Mexican Light and Power Company. The American and Foreign Power Company subsidiaries lack funds for investment and are making no plans for increasing their generating capacity, making it necessary for the Federal Electricity Commission to expand generating capacity in the Company's service area.

In addition to the projects which are to be completed between 1951 and 1953, the Federal Electricity Commission plans to place in operation by the end of 1955 two additional hydroelectric projects (Tingambato and El Cobano) with a combined capacity of 202,000 kw. Other plans for expansion have not been announced by the Commission and no estimates of total increases in capacity after 1953 are possible. Hydroelectric projects connected with irrigation works in the Papaloapan basin and in other areas of the country will form an important part of the Commission's future program, but none of these projects will be completed before the end of 1955.

The expansion program for the 1951-1953 period will increase the concentration of electric power capacity in the Mexico City area. As a result of this program the combined share of the Federal District and the states of Mexico and Puebla in total power capacity will rise from 35% (in 1951) to 40%. The share of the North and the North Pacific would remain unchanged, while the relative position of the South and the Center region outside the area around Mexico City would decline. The completion of the Tingambato project in 1955 will increase further the relative importance of the Mexico City area, although other projects (like El Cobano) may offset this to some extent.

Since the overloading of most electric power systems is not likely to be relieved soon, there is little to be gained by interconnecting them. However, an interconnected system is being built up in Sonora and limited attempts are being made elsewhere to the same end. The steps taken so far have made it possible to release some mobile units for use in other areas; it is also expected that increasing numbers of small diesel plants will be released for relocation.

In the Mexico City area, water resources and demand have been sufficient to permit the development of hydroelectric power. Outside this area, wnere water is often scarce and demand less concentrated, fuel is the principal source of electric power. Future development is likely to be determined by the same factors. With the exception of the Lecheria plant now being constructed by the Mexican Light and Power Company, all the units to be completed in the central area by the Company and the Federal Electricity Commission by 1953 are hydroelectric. On the other hand, most of the expansion elsewhere between 1951 and 1953 will take the form of thermal plants.

Mexico's water resources are estimated to be sufficient to produce an additional 6 to 7 million kw. of power, nearly ten times the capacity of Mexican hydroelectric plants in 1951. Existing plants and plants under construction have, however, already appropriated the best of these water resources.

It may be expected that the cost of constructing hydroelectric plants will not only be higher than in the past, but before long it will be more economic to construct thermal plants. The continued reliance on fuel as a major source of energy for generating power will make a significant claim on the output of petroleum and natural gas. This points to the need to increase the output of petroleum and natural gas.

In the future, hydroelectric power will be increasingly combined with irrigation works such as those under construction in the Papaloapan, Tepalcatepec and Falcon Dam projects, and in the northwestern part of the country. The use of water resources for both irrigation and the production of electric power offers the advantage of economy. However, the use of a single body of water for more than one purpose requires coordination of planning and operations among the agencies concerned.

In Mexico, authority for planning, constructing and operating the Government's power plants rests with the Federal Electricity Commission, even when a plant utilizes water of an irrigation system On the other hand, the use of water for irrigation is under the jurisdiction of the Ministry of Hydraulic Resources. Where the alternatives of irrigation or power production arise, irrigation has priority. The Federal Electricity Commission and the Ministry of Hydraulic Resources have reached an agreement on the division and coordination of their functions, but it remains to be seen whether it is workable. The Colimilla plant of the New Electric Company of Chapala furnishes an example of what can happen when the planning activities of official agencies which are to utilize a single water supply system for a variety of mutually-exclusive purposes are not adequately coordinated. Although the severity of recent droughts has contributed considerably to the result, competition between three government agencies for the waters of Lake Chapala and rivers flowing into it for use in generating power, irrigation and consumption in the Federal District has made it a virtual certainty that a substantial part of the investment in the generating equipment of the New Electric Company of Chapala will almost never be utilized productively at its present site.

C. OFFICIAL POLICY

Rising labor costs in the industry and an official rate policy which does not always permit compensatory increases in rates, have maintained earnings of privately-owned utilities at levels which leave little for reinvestment and provide no inducement for investment of new capital. The Mexican Light and Power Company would not have been able to embark on a large expansion program without substantial loans from the International Bank and government agencies. Thus, only 39% of the new investments made by the Company from 1948 to 1951 came from its own resources; 42% of the total were International Bank loans guaranteed by the Mexican Government and 19% came from loans by government agencies (Table 74).

In the absence of a fundamental change in the official rate policy and in the industry's labor conditions, therefore, the private companies will not be in a position to expand their facilities to meet demand. In that event, it may be expected that the Government will continue to increase its participation in power development and in the ownership of generating facilities. In any event, the Federal Electricity Commission will play a major role in determining the direction of, and the rate of investment for electric power development.

In carrying out its program of power development, the Federal Electricity Commission has relied for funds mainly on government appropriations and on foreign loans, principally from the Export-Import Bank and the International Bank. Between 1944 and 1950, 40% of the investment funds of the Federal Electricity Commission (including the New Electric Company of Chapala) came from federal appropriations and 30% from foreign loans. In addition, 14% of its investment funds came from the proceeds of a 10% tax on power consumption, 12% from domestic loans (mostly from Nacional Financiera) and only 3% from operating profits (Tables 72 and 75).

The Government's rate policy has restricted the earnings of the Federal Electricity Commission as well as those of the privately-owned utilities. For this reason, the operating surpluses of the Commission have been insignificant, and it cannot finance its future expansion program from this source in the absence of a basic change in rate policy. Even if the Federal Electricity Commission offered to sell some of its plants, they would not yield a return under present conditions which would make them attractive to private investors and, while not negligible, the proceeds from the 10% tax on power consumption will not be an important source for financing investment of the magnitude required in the next decade.

The Commission will have to continue to rely on substantial foreign loans for future development, but it will also require large amounts of domestic investment funds. It is clear, however, that no important source of domestic investment funds has emerged outside government appropriations. After the Commission had run into serious financial difficulties in 1949, the Government increased its appropriations from 50 million to about 150 million pesos annually. Whether appropriations of this size will insure the necessary rate of expansion of power facilities will depend on the Commission's future earnings as determined by official rate policy, and on the level of investment by the privately-owned utilities. The importance of power for Mexico's economic development makes it urgent, therefore, that careful consideration be given to the capital requirements of the industry, to the respective roles to be assigned to privately and publicly owned enterprise, and to ways of insuring that investment funds will be available when needed.

CHAPTER VI

Industry

A. INDUSTRIAL DEVELOPMENT IN 1939-1950

At the beginning of World War II, there was much unused industrial capacity in Mexico. When the war reduced supplies of manufactured goods from the United States and Europe, new opportunities appeared for Mexican industry at home and abroad. The excess capacity permitted substantial increases in production to be achieved without much new industrial investment, which was made more difficult by the shortage of machinery and equipment. Consequently, industrial investments rose to a lesser extent than other investments, and most of the increase in industrial output during the war was achieved by more intensive use of existing equipment.

Textile manufacturing furnishes an example, although possibly an extreme one, of the wartime industrial pattern of high output and low investment. Production in this industry, the most important in Mexico, increased by an annual average of 6.6% between 1939 and 1945 in spite of almost negligible additions to capital. The same trend was apparent in the total volume of industrial production, which rose by an annual average of 9.4% from 1940 to 1945 (Table 78). This increase was greater than the rise in production and services in most other fields and more than the advance in real gross domestic product of 8.2% during the same years. On the other hand, industrial investment as a ratio of total investment declined from 26% in 1939 to an annual average of only 17% in 1940-1943 (Table 79). Industrial investments began to expand in 1943 and 1944, but the effect of these investments on production could not have been appreciable until some years later (Chart 12).

The increase in output of Mexican manufactures during the war was stimulated by expanding domestic incomes and by the lack of foreign competition at home and abroad. Before the war, exports of manufactured goods had been of minor importance, accounting for only 1.7% of the total value of industrial production; by 1945, the ratio had increased to 6% (Table 78).

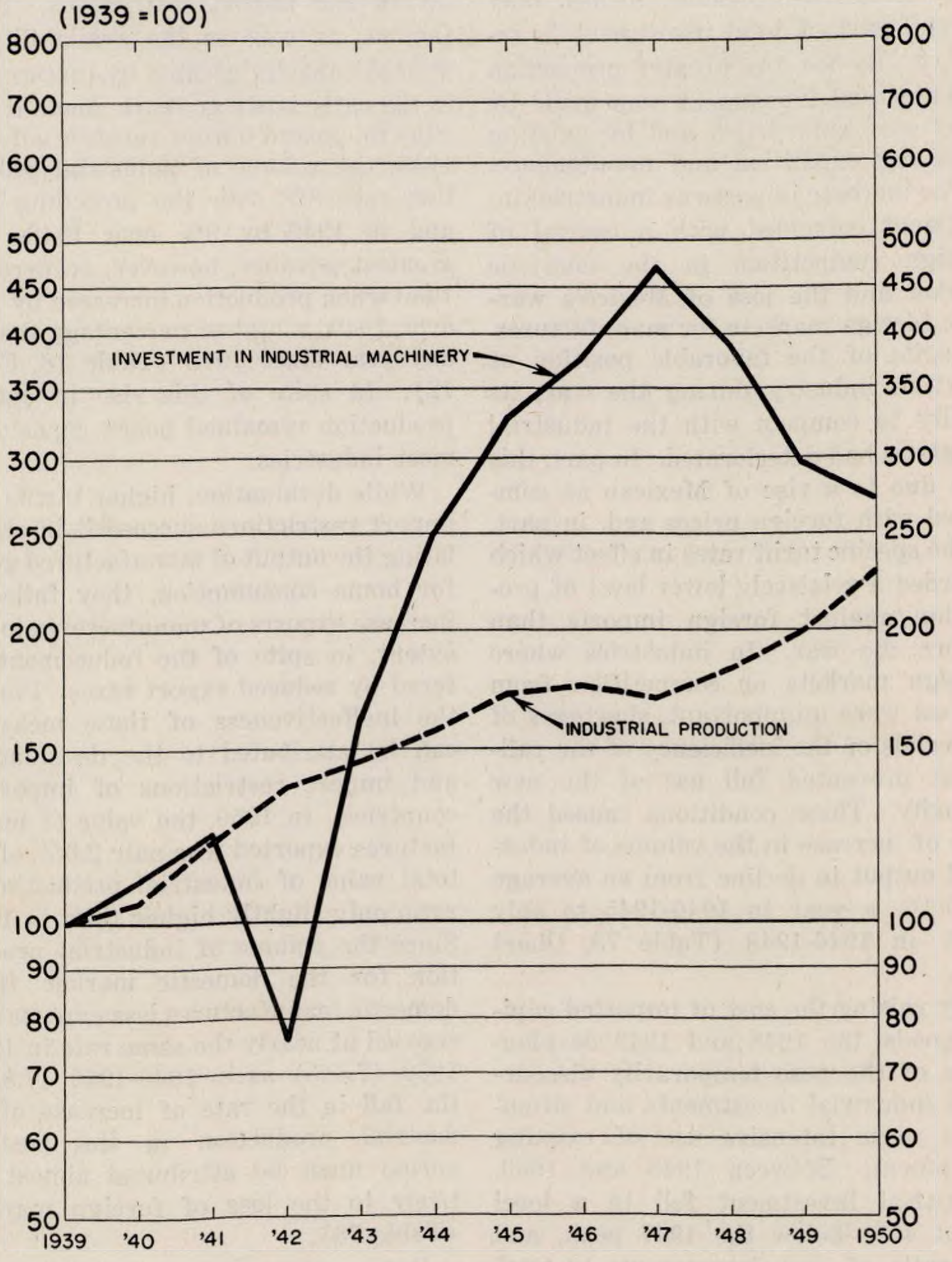
In contrast, the postwar years were notable for the high level of industrial investment. Mexican industry emerged from the war with funds to finance expansion, and it proceeded to increase capacity to correspond to a somewhat optimistic evaluation of the postwar market prospects at home and abroad. As industrial machinery and equipment became more plentiful, the volume of industrial investment rose steadily, and in 1947 it was almost five times as great as in 1939. Whereas in 1944, industrial investment accounted for only 20% of total investment in the country, in 1947 the proportion had increased to 30% (Table 79).

A part of the increase in industrial investment in this period was in large-scale industrial projects, mostly spon-

CHART 12

VOLUME OF INVESTMENT IN INDUSTRIAL MACHINERY COMPARED WITH VOLUME OF INDUSTRIAL PRODUCTION

(1939 = 100)



SOURCE: Volume of investment, Combined Mexican Working Party; volume of production, Bank of Mexico.

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sored by Nacional Financiera. Many of these projects had been planned or started during the war in order to relieve acute shortages. These undertakings, though conspicuous, formed only a small part of total investment in industry. By far the greater proportion of industrial investment was made by small new enterprises and by existing firms for expansion and maintenance.

The increase in postwar industrial investment coincided with a revival of foreign competition in the domestic market and the loss of Mexico's wartime foreign markets for manufactures. In spite of the favorable position of Mexican industry during the war, its ability to compete with the industrial countries had deteriorated. In part, this was due to a rise of Mexican as compared with foreign prices and, in part, to the specific tariff rates in effect which afforded a relatively lower level of protection against foreign imports than before the war. In industries where foreign markets or competition from abroad were unimportant, shortages of materials or the inefficiency of the railroads prevented full use of the new capacity. These conditions caused the rate of increase in the volume of industrial output to decline from an average of 9.4% a year in 1940-1945 to only 2.3% in 1946-1948 (Table 78, Chart 12).

By raising the cost of imported capital goods, the 1948 and 1949 devaluations of the peso temporarily discouraged industrial investments and stimulated more intensive use of existing equipment. Between 1948 and 1950, industrial investment fell to a level about 40% below the 1947 peak, and the ratio of such investments to total gross investment fell to 21% from 30% in 1947 (Table 79).

While investment declined, the domestic demand for Mexican manufactures revived under the combined influence of devaluation, higher protective tariffs and import restrictions. These factors, as well as the availability of unused capacity created by investments in the early postwar years, made it possible to expand output substantially. In 1948, the volume of industrial production rose 8% over the preceding year and in 1949 by 9% over 1948. The greatest advance, however, occurred in 1950 when production increased by 14% over 1949, a higher percentage than in any year since 1942 (Table 78, Chart 12). In spite of this rise in output, production remained below capacity in most industries.

While devaluation, higher tariffs and import restrictions succeeded in stimulating the output of manufactured goods for home consumption, they failed to increase exports of manufactures to any extent, in spite of the inducement offered by reduced export taxes. Part of the ineffectiveness of these measures can be attributed to the devaluations and import restrictions of importing countries. In 1950, the value of manufactures exported was only 2.3% of the total value of industrial production, a ratio only slightly higher than in 1939. Since the volume of industrial production for the domestic market (total domestic manufactures less exports) increased at nearly the same rate in 1946-1950 (7.4%) as in 1940-1945 (7.8%), the fall in the rate of increase of industrial production in the postwar period must be attributed almost entirely to the loss of foreign markets (Table 78).

During the war years, most industries had worked closer to full capacity than before or since, but even then there was excess capacity in some. In most cases, this was due to wartime shortages of imported raw materials like rayon yarn, wool or pulp for which domestic substitutes were not available in required amounts or quality; but inadequate supplies of power and fuel, and transportation difficulties also played a part.

The considerable investments in the later war and the first postwar years increased surplus capacity. Between 1946 and 1950, every industry for which data exist operated below full capacity, especially in the first three years of this period (Chart 13).

Excess capacity is expensive for a country where capital is scarce. Nevertheless, it is natural in a rapidly expanding economy for expansion temporarily to outstrip demand in anticipation of the market's growth. Nor is optimum operating efficiency of new equipment likely to be attained until adequate technical and administrative experience has been obtained.

If these were the only reasons for output remaining below capacity between 1946 and 1950, there would be no cause for complaint. There were, however, additional reasons due to imperfect planning. Thus, for example, idle capacity appeared in the iron and steel industry when it was expanded without any steps being taken to increase the production of coal and coke. In the paper and meat packing industries also, plant capacity was expanded beyond supplies of raw materials, and there appears to be little likelihood that these industries will be able to operate at full capacity for some years. The sugar industry expanded beyond the market as well as beyond the supply of cane. The cement industry also became too big for the home market for the time being. The textile industry lost its wartime foreign markets without a compensatory increase of domestic sales. Finally, the inefficiency of the railroads seriously handicapped heavy industries like cement and iron and steel.

Data on investments by industries are often lacking, but available figures on consumption and production reinforce other reasons for concluding that since 1939 the development of the capital goods industries has been greater than that of the consumer goods industries. Thus, while the output of the two principal capital goods industries, cement and iron and steel, increased annually by averages of 12% and 10% respectively, between 1940 and 1950, production in the two most important consumer goods industries, textiles and sugar, rose by about 5% only.

In Mexico, the principal capital goods industries require a much higher investment of capital per unit of value added and per worker employed than the major consumer goods industries. It is this factor which makes the orientation of industrial investment toward capital goods industries a matter of especial concern in a country where capital resources are scarce and the potential market for capital goods smaller than for consumer goods.

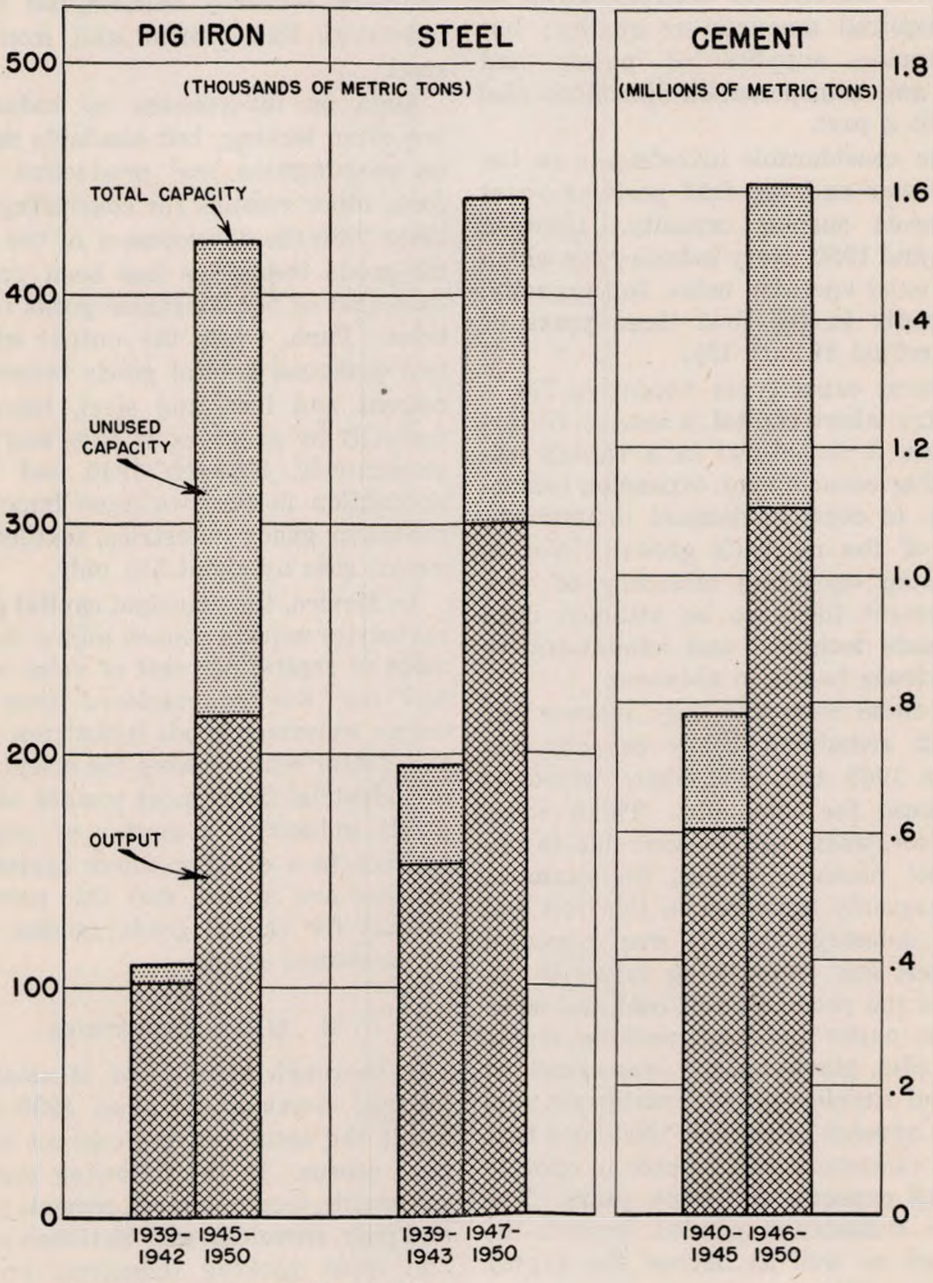
B. MAJOR INDUSTRIES

A thorough analysis of Mexican industrial development since 1939 must await the results of the current industrial census. In the following sections the textile, iron and steel, cement, paper and pulp, chemicals and fertilizer, sugar and meat packing industries are selected for separate treatment, not only because the information available for

CHART 13

CAPACITY AND OUTPUT OF PIG IRON, STEEL, AND CEMENT INDUSTRIES

ANNUAL AVERAGES FOR SELECTED PERIODS



SOURCE: Nacional Financiera, Annual Report for 1951.

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these branches, although far from satisfactory, is more complete than for other industries, but also because they are representative of, and important in the Mexican economy.

There remain, however, many industries which have greatly expanded for which dependable data do not exist. Among the most important of these are the food and drink industries, of which sugar and meat packing are but two branches. The establishment of assembly plants for cars and various kinds of machinery and equipment has also been important since 1939, but only fragmentary data are available for these fields. A similar situation prevails in glass and rubber manufacturing, both of which have grown considerably, while the prevalence of small factories and handicraft shops makes official data on shoe production of little value. The dearth of information is greatest, however, on industries established within the last decade. Until more adequate data become available, therefore, any discussion of Mexico's industrial development is necessarily incomplete.

1. *The Textile Industry*

During the war, production in the textile industry increased greatly, reaching a level by 1946 of 48% above 1939 (Table 80). The expansion was greatest for cotton textiles, which represents the bulk of Mexico's textile production. Production of woolens increased only moderately and silk and rayon textile output declined because of difficulties in obtaining better grade wool and rayon yarn from abroad.

The growth in production was achieved almost entirely through more intensive use of existing equipment, the industry changing over from its normal one-shift basis to two and three shifts, and by postponing maintenance where possible in order to avoid interruptions in operations. Since new machinery was unobtainable estimated investments between 1939 and 1944 remained at the low average level of 5 million pesos annually, only 2.6% of total industrial investments in those years. When textile machinery became more plentiful after the war, investments increased to 56 million pesos annually in 1947-1948, an amount equivalent to 4.4% of total industrial investments in those years. In 1949 and 1950, however, investments again declined (Table 81). Although some old mills were partially modernized and 15 new mills were built, there was no general modernization and the industry continues for the most part to operate with antiquated equipment.

Textile production was increased during the war in prospect of exports at high prices. Before the war (1939 and 1940), Mexican textile exports had been negligible, amounting to less than 1% of the total value of textile production; between 1942 and 1944, this ratio rose to an average of 15% and in 1945-1946 to 32%. The substitution of domestic textiles for imports played almost no part in the wartime expansion of Mexican textile production, imports continuing to supply a similar proportion of domestic consumption (9 to 12%) as before the war (Table 80).

After the war, when the industrial countries were able to resume textile exports, Mexican producers lost much of their foreign market. Nor did the devaluations of the peso in 1948 and 1949, and the abolition of Mexican export taxes on most textiles, have any effect on the downward trend. By 1948-1950, exports of textiles averaged only 10% of the total value of textiles produced in those years (Table 80). Renewed competition from the industrial countries was also felt in the domestic market. In 1945, the value of textile imports as a ratio of apparent domestic consumption equalled 13%; by 1947, it had increased to 19% (Table 80).

As a consequence, in 1947 the output of textiles fell 12% below that of the previous year. Exports continued to decline, but increases in the tariff, import restrictions and devaluation helped the industry to recapture its prewar position in the domestic market, and production in 1949 again reached the 1946 level. The highest output of the 1939-1950 period was attained in 1950, when output rose by another 12% (Table 80). Nevertheless, in 1951 most of the industry was still operating below capacity.

In the absence of statistical data on changes in textile inventories, consumption can be approximated by adding imports to domestic production and deducting exports. On the basis of such estimates, per capita consumption of textiles declined in 1945-1946 to a point 8% below the 1939 level. As a result of higher imports in 1946 and 1947, and increasing production for the local market beginning in 1948, per capita consumption again rose and in 1950 attained a level of 5.5% higher than in 1939. However, for the 1939-1950 period as a whole, textile consumption increased at an average of only 0.5% per annum (Table 80). It is likely that these approximations exaggerate the decline in per capita consumption during the war when textile stocks were reduced, as well as the increase after the war when inventories accumulated. However, it is probable that the estimate of per capita consumption for the entire 1939-1950 period is substantially correct.

Textile prices have shown a marked tendency to rise more rapidly than general prices. According to indices of the Bank of Mexico, the annual average increase in wholesale prices of domestically manufactured textiles was 26% greater from 1939 to 1950 than the increase in the general wholesale prices of 210 commodities. This trend has been even more noticeable during the postwar years than during the war, when foreign demand placed pressure on domestic prices, partly because cotton prices were higher but also because the industry had the benefit of higher tariff protection.

Although an increase in textile exports is not unlikely, the textile industry will have to rely primarily on domestic demand for its future expansion. The growth of the domestic market in turn depends on the rates of increase in population and real income and on the level of textile prices compared with other commodities. Assuming that population increases at a rate of 3.0% per annum in the next few years and per capita consumption at the 1939-1950 rate of 0.5%, textile output would expand at a rate of 3.5% a year. Such a rate of growth would be lower than both the average annual rate of 4.7% at which the textile industry expanded and the rate of 7.7% at which total industrial production increased from 1939 to 1950 (Tables 78 and 80). It would seem, therefore, that only a relative decline in textile prices could make it possible for the industry to reach either its past rate of growth or that of other industries.

Both the manufacture and distribution of textiles in Mexico offer great possibilities for increasing productivity and consequent reduction of prices. According to a study of the cotton textile industries in five Latin American countries recently published by the Economic Commission for Latin America,[1] productivity in the Mexican cotton textile industry is far below the standard for an industry with modern machinery organized on a rational basis. The number of man-hours-per-kilogram of production was estimated to be 269% higher in Mexican cotton textile industry than in a standard modern industry. With as many as 85% of the spindles and 95% of the looms out-of-date, it is not surprising that antiquated equipment was considered the most important cause of low productivity in the industry. However, the combined effects of an excess of workers in the industry, defects in maintenance and in the quality of yarn, poor working methods and inadequate organization were found to be nearly as detrimental as the use of old equipment in limiting the industry's productivity.

The overabundance of labor in the industry and in the country at large has led the textile trade unions to consistently oppose the introduction of labor-saving methods and machinery. This point of view is also mirrored in the labor laws which rigidly circumscribe the possibilities of modernizing and rationalizing the industry. Only plants established after the war have been exempt from the restrictions of these laws. Since the high protective tariff has made it possible to operate profitably in spite of technical inefficiency, management and labor have become complacent about the prevailing state of affairs in the industry. When the industry has been threatened by foreign competition, increased protection and import restrictions have been found to be the easiest way out of the difficulty.

Early in 1951, however, employers and workers in the cotton textile industry agreed on general rules to be followed in the modernization of equipment, rationalization of working methods and wage scales, and specialization within the industry. The agreement is intended as a preliminary outline of principles to be followed by other agreements to implement specific programs. Although constituting an initial step toward the solution of the industry's problems, the preliminary understanding is not expected to have significant consequences for the time being.

There is little agreement on the cost of modernizing the textile industry, but it is certain that the amount would be substantial. It would be even greater if the cost of resettling and creating productive employment for workers displaced by modernization were also taken into account. A recent study by Nacional Financiera and the Bank of Mexico concludes that nearly 2 billion pesos at 1951 prices would be required from 1950 to 1970 to modernize and expand the textile industry.

On the other hand, the ECLA report indicates that even without the purchase of new machinery, there is wide scope for improving plant organization and working methods, especially in the spinning mills. Such measures would not divert much investment from other sectors of the economy which could absorb surplus textile workers. Conversely, investments in new textile machinery and equipment would require the curtailment of investments in other fields and so would limit opportunities for reemploying workers separated from the textile industry by the introduction of labor-saving equipment. In view of this, there appears to be considerable merit in the recommendation made in the report of the Economic Commission for Latin America that attention be directed at first to the reorganization of the industry.

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[1] *Labor Productivity of the Cotton Textile Industry in Five Latin American Countries,* United Nations Economic Commission for Latin America, 1951.

Improved distribution of textiles could contribute as much as the rationalization of manufacturing towards lower prices. Distribution units, which are often linked to manufacturing through joint ownership, now operate on the basis of high margins and relatively low sales volume.

The textile industry is in a strategic position to play a much more significant role in Mexico's economic development than in the past. In Mexico, where the limited size of the domestic market is a serious obstacle to industrial development, the textile industry has a potential market greater than any other industry. Hitherto, high prices due to inefficiency and tariff protection have restricted the market and hampered the industry's development. Since export prospects are poor, future expansion of the industry will depend on the removal of the obstacles to the growth of domestic consumption.

2. *The Iron and Steel Industry*

The considerable increase in domestic consumption of iron and steel since 1939, and wartime difficulties in importing them, stimulated an expansion which increased the capacity of the iron industry nearly fourfold and more than doubled the capacity to produce steel. From 1939 to 1945, iron and steel consumption rose by an annual average of 12.2%. Consumption continued to increase in the postwar period 1946-1950, but at the somewhat slower rate of 7.9% (Table 82). In the space of only three years, from 1942 to 1945, capacity to produce pig iron increased by 287%, from 110 thousand metric tons a year to 423 thousand tons. Capacity of the three main steel producers, rising at a slower rate and over a longer period than in the case of iron, increased by 134% from 195 thousand metric tons in 1943 to 454 thousand tons in 1949 (Table 83).

However, production has not yet increased in the same proportion as capacity. This is especially apparent in the case of iron. Between 1939 and 1942, before the industry's expansion, output in the iron industry averaged 93% of capacity; from 1945 to 1950, after expansion, production averaged only 51% of operating capacity. In the case of steel, production averaged 78% of operating capacity before expansion in 1939-1943 and only 68% after expansion in 1947-1950 (Table 83, Chart 13).

The increase in domestic consumption of steel has been much greater than the rise in production. Since iron and steel imports in 1950 were more than three times higher than in 1939, surplus capacity in the iron and steel industry cannot be attributed to overexpansion of the industry. The blame must be laid on the lack of coordinated development of railway transportation and the production of coal and coke.

According to one group of investigators,[2] deficiencies in railroad transportation which delayed the movement of raw materials and finished goods were largely responsible for the wide gap between output and capacity. The absence of storage facilities at blast furnaces which might have mitigated transportation difficulties was also considered important. In the case of pig iron, it was reported that production could be increased and cost reduced by improved operating practices, especially in the blending of ores and in the sizing of ore, coke and limestone.

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[2] United Nations Technical Assistance Administration. *An Inquiry into the Iron & Steel Industry of Mexico.* Report of a United Nations Team of Technical Experts, New York, 1951.

Other competent observers are inclined to give greater weight to shortage of coal and coke in explaining the relatively low level of iron and steel production. According to official statistics, coal production in 1940-1950 was from 10 to 20% below the prewar level (Table 61). Most of the coal mined in Mexico is used to produce coke for industrial purposes and the major consumer of coke is the iron and steel industry. Although the official figures probably underestimate the amount of coal produced, it is known that coal production has not been rising at the rate needed to supply the requirements of an expanding iron and steel industry. Moreover, until very recently when steps were taken to develop the Palan mines, no really effective public or private measures had been taken to increase coal production.

Coke production is estimated to amount to between 400 and 500 thousand metric tons a year, about two-thirds of which are produced by one firm, the American Smelting and Refining Company. Much of the coke is produced from unwashed coal and its inferior quality has been a serious handicap for the iron and steel industry. In addition, domestic production of coke has been considerably below requirements and has had to be supplemented by imports. Although imports have risen from negligible quantities before the war to substantial amounts in recent years, they have remedied the shortage only in part.

The United Nations technicians who studied the Mexican steel industry estimated that, although a part of the equipment in the coke industry could not be used without extensive repairs, the industry had capacity in 1949 to produce 760,000 metric tons of coke. This was substantially in excess of both the estimated 600,000 tons required and of 400,000 tons actually produced. The principal reasons given for the low level of production were the shortage of coal, inadequacies of transportation and storage facilities, poor operating practices and poor maintenance of coke ovens.

Projects are now under way which will greatly expand the capacity of the coke industry, improve the quality of the coke and eliminate the waste of valuable by-products. The American Smelting and Refining Company is replacing its beehive ovens with by-product ovens, thereby increasing capacity by some 60,000 tons a year. The Bank of Mexico and Nacional Financiera are also sponsoring the establishment of a modern coking plant capable of producing 600,000 tons annually which is expected to be in operation in 1954. The addition of this unit will create capacity for coke production substantially in excess of requirements and provide a considerable margin for further expansion of the iron and steel industry.

Production of finished iron and steel products is mostly concentrated on bars, plates, structural shapes, nails, screws, bolts and rivets. For these items domestic production supplies most of the internal requirements. On the other hand, the output of pipe, tubes and fittings, wire and wire manufactures, and especially of tinplate, rails and track accessories, is far below the domestic consumption level. Complete and reliable data on capacity and output of finished iron and steel products are not available, but the United Nations technicians found that production was also far below capacity in this sector of the iron and steel industry. The report of these technicians indicates further that relatively small investments in new equipment and improved operating practices could lift the output of finished products to 550,000 metric tons a year, the full capacity of Mexican steel furnaces.

Excess capacity and defective operation have been partly responsible for keeping the cost of production of Mexican iron and steel above those of other steel-producing countries. According to the United Nations experts, Mexican prices for the principal iron and steel products in 1950 were about double those prevailing in Western Europe and 67% higher than those in the United States. Without tariff protection such differentials could not be maintained.

The Altos Hornos plant is increasing its capacity substantially for producing cold-rolled sheets and tinplate. In 1951 the Compania Fundidora made considerable additions to its capital in order to expand its facilities for producing finished products. In addition, plans are going forward to construct a plant for producing seamless tubing. While these activities could do much to increase the output of needed finished goods, additional capacity alone will not increase production until railroad transportation and coal and coke supplies have been greatly improved.

Of the estimated 600,000 tons of iron and steel consumed in Mexico in 1950, 60% was provided by domestic production and 40% by imports (Table 82). These proportions are similar to those prevailing before the war. According to the estimates of the United Nations technicians, which are substantially higher than Mexican estimates, the total capacity of the iron and steel industry is almost equal to domestic consumption. However, the lack of facilities for producing steel alloys and many finished products in quantity would prevent the industry from supplying the entire domestic requirement even if there were no impediments to maximum output. Moreover, the small size of the Mexican market makes it uneconomic for Mexico to seek complete self-sufficiency in all iron and steel products.

Only superficial knowledge of Mexico's iron ore and coal reserves is available, but more thorough investigations than ever before are now being undertaken. On the basis of existing information, reserves appear to be sufficient to support a much larger iron and steel industry, although their location may raise difficult transportation problems in some cases.

Plans are now being made to expand iron and steel production capacity. In view of the rapidly increasing demand for these metals, it is not altogether premature to give thought to this matter at this early stage. Such planning could be especially useful if it was made with due deliberation to avoid the errors of the past. Nonetheless, the more urgent task for the present is the more productive use of investments already made in the industry.

3. *The Cement Industry*

Increased public works in the late thirties and the great acceleration in both public and private construction during and after the war, stimulated a considerable expansion of the cement industry. When difficulties in obtaining new equipment were encountered during the war, they were partly overcome by the acquisition of second-hand machinery. The growth in the industry's capacity was achieved both by the erection of new factories and by enlarging the capacity of existing ones. Between 1942 and 1946, the number of cement plants increased from 8 to 15 and the industry's capacity almost doubled (Table 84).

In spite of this expansion, however, neither capacity nor output was able to keep pace with domestic demand. From 1940 to 1945, consumption of cement increased by an average of 14% annually, while capacity and production rose by only 11% and 12% respectively. Imports, which had been unimportant before the war, amounted to 155,000 metric tons and to 15% of consumption in 1946 (Table 84). Even with high imports, however, there was a serious shortage of cement throughout the war and distribution was subjected to official allocations and price controls. After the war, expansion of capacity continued. Four new factories were built between 1946 and 1948, and from 1946 to 1950 the industry's annual capacity increased by 680,000 tons, a somewhat higher amount than the increase in capacity in 1942-1946 (Table 84).

The wartime construction boom came to an end in 1947. In that year, consumption of cement increased only slightly and it actually decreased in 1948. Beginning in 1949, however, public construction revived and cement consumption increased by 12% in 1949 and by 17% in 1950. Nevertheless, consumption advanced by an average of only 8% annually for the years 1946-1950, while capacity was rising by 11% a year (Table 84). Although domestic production replaced imports, excess capacity stimulated attempts to export cement. In 1948, 35,000 tons of cement, constituting 3.2% of the industry's output, were exported, mostly to the United States and Guatemala. In 1949 and 1950, however, cement exports were lower. The experience of recent years in this field makes it clear that export possibilities for Mexican cement are limited by the inefficiency and high cost of transportation and the lack of storage facilities.

In the twelve years from 1939 to 1950, the cement industry operated below capacity. Even in 1940-1945, when shortages of cement seriously handicapped construction, output averaged only 78% of capacity. Since then, excess capacity has increased, the average ratio of production to capacity having declined to 69% in 1946-1950 (Table 84, Chart 13).

The main reasons for the low level of wartime operations were the widespread use of second-hand equipment, shortages of fuel, transportation difficulties and labor problems. The industry still relies on used machinery, but the fuel shortage has been relieved by improved distribution of petroleum in recent years and labor disputes have not been important since the war. Attempts have been made by the Ministry of Economy to improve transportation by dividing the country into zones for purposes of distribution of cement and location of new plants. One of the largest cement plants in the country reported to the Combined Mexican Working Party that inadequacy of railroad transportation was the principal reason it had been working at only 30% of capacity in 1950. From 1947 to 1950, it is probable, nevertheless, that for the industry as a whole, the inability of the market to absorb additional cement was the chief reason for the growth of excess capacity.

In its best years, the cement industry has never operated at more than 83% of capacity and 1950 production of 1,388,000 metric tons was only 70% of capacity (Table 84). If the industry's output could be raised to 90% of capacity, it would attain 1.8 million metric tons a year. Should consumption continue to expand at the same rate as in the last decade, as is probable, domestic demand would exceed 1.8 million tons in a few years. To meet such an increase in demand, substantial expansion of the industry would be required.

4. *The Pulp and Paper Industry*

Increased domestic demand for paper, and difficulties in obtaining supplies abroad, also led to a big expansion of the Mexican pulp and paper industry during the war. Although production increased substantially, it was insufficient to meet the growing domestic demand. New machinery was hard to get and most of the increase in output came from existing equipment, and to a lesser extent, from such second-hand machinery as could be obtained abroad.

Between 1937 and 1946 the production of pulp increased by 45% (Table 85). In spite of this expansion, the proportion of domestic production to consumption remained unchanged at about one-third of the total, and the shortage of pulp was a major obstacle to increased paper output during the war. Although the rise in paper output averaged 4.7% annually from 1937 to 1946, it was far below requirements. Imports of newsprint, which has not been produced in Mexico since 1935, almost doubled during this period. Other types of paper, 80% of which had been supplied by domestic producers before the war, were also imported in considerably larger quantities (Table 86). Nevertheless, supplies remained below requirements, making it necessary to allocate newsprint and some other kinds of paper during the war.

Soon after the war, the principal pulp and paper mills acquired new machinery and several new plants were started. The most important was the Atenquique mill, sponsored by the Government and Nacional Financiera, which was opened in 1946. Located in a richly-forested area of the State of Jalisco, the mill produces unbleached chemical pulp which it uses mostly for making coarse paper. Most of the increase of pulp production, from 27,000 metric tons in 1946 to 68,000 tons in 1950, came from this mill (Table 85). Although this rise in output made it possible for domestic producers to supply two-thirds of the total pulp requirements of the country in 1947-1950, instead of the one-third provided in 1937, the absolute volume of pulp imports remained almost unchanged compared with the prewar period (Table 85).

The Atenquique mill was also mainly responsible for increasing paper production by an annual average of 15% from 1946 to 1950 (Table 86). The expansion in output has been sufficient during the same period to meet a 9% annual rise in consumption of paper other than newsprint. The higher level of production also permitted a reduction in imports from an annual level of 24,000 metric tons in 1946-1947 to 13,000 in 1948-1950 (Table 86). Except for newsprint, most paper imports are now specialties for which the demand is limited and which could not be produced economically by the Mexican industry. For this reason, there is little possibility of further substitutions of domestic paper production for imports.

Information on the capacity of the pulp and paper industry is fragmentary. On the basis of the available data, it can be determined that, with the exception of the Atenquique mill in recent years, the industry has been working considerably below capacity. This has been due in part to the diversification of production imposed on most mills by the small domestic market, which involves substantial losses in time in making frequent changeovers from one line of output to another. Location of most of the industry near Mexico City, where forest resources are inadequate, and difficulties in obtaining pulp imports during and after the war were also important in keeping production below potential. The industry can now meet the needs of the domestic market, except for newsprint and some special types of paper with a limited market. It is also likely that increases in domestic demand can be met for some years to come without any big increase in the industry's capacity.

The main prospects for further growth of the paper and pulp industry lie in the direction of newsprint and bleached pulp, neither of which is now produced within the country. The high cost of raw materials might hinder the establishment of a domestic newsprint industry. It is possible, however, that this drawback could be overcome by the adoption of scientific methods for the use of forest products and the use of less expensive raw materials, such as bamboo, as a source of raw material for newsprint.

Plans are now being made to establish two mills to produce bleached pulp. Each of the mills will be capable of producing 40,000 metric tons of pulp annually. One, which would concentrate on pulp for industrial uses as in the manufacture of rayon, tire cords, and the like, is to be located in the State of Chihuahua; the other is to be built in the State of Michoacan. Plans have also been announced for a newsprint mill with an annual output potential of 60,000 tons. The plant, which would be located in the Papaloapan area of the State of Veracruz, would use bamboo as raw material. In addition, several small mills are to be built to manufacture pulp from bagasse. If present plans for the expansion of the industry are carried out, production will more than suffice to eliminate imports of pulp and newsprint at present levels of consumption.

5. *The Chemical and Fertilizer Industry*

The chemical industry, which manufactures caustic soda, sulphuric acid, sodium carbonate, explosives, plastics, paints and other products, expanded more rapidly than most others during the war. According to census data for 1940 and 1944, the value of chemicals produced increased by 243% between those years, while the total value of industrial production rose by only 159%. Imports also increased considerably during this time, but to a much lesser extent than production. Consequently, the proportion of chemicals supplied for domestic consumption by home manufactures almost doubled from 14% in 1940 to 27% in 1944 (Table 87). The value of exports grew to 41 million pesos ($8.4 million), representing 43% of the total value of chemical production in 1944.

After the war, when foreign chemicals again became available in quantity and variety, imports increased rapidly and exports declined. As a result, the industry's expansion slowed down. Thus, although the value of domestic chemical production rose by an estimated 138% from 1944 to 1950, the increase was appreciably smaller than the 166% rise in industrial production in the corresponding period. Moreover, the proportion of consumption supplied by domestic output declined from 27% in 1944 to 24% in 1950. The ratio of exports to the total value of chemicals produced also declined to 20% between those years, although the absolute value of such exports remained unchanged (Table 87).

While chemicals are produced by a large number of private firms, the principal producer of fertilizer in Mexico is a government enterprise, the Guanos and Fertilizers Company. This firm, started in 1943 by Nacional Financiera, originally concentrated on processing guano found on islands of the Pacific coast. Production of fertilizer rose from an annual level of 20,000 metric tons in 1945-1949 to 43,000 metric tons in 1950 (Table 52). However, according to information supplied to the Combined Mexican Working Party by the Company, all its plants were working far below capacity in these years because of the lack of storage. In the same period (1945-1950), imports of fertilizer each year averaged 19,000 metric tons or 44% of domestic consumption.

In 1951 a new plant of the Guanos and Fertilizers Company, with capacity to produce 66,200 metric tons of ammonium sulphate annually, began operation. The Guanos and Fertilizers Company estimates that it can promote the use of fertilizer in the country by selling fertilizers from the new plant at prices 40% lower than those for imported varieties. In this respect, it should be assisted materially by the subsidy it receives from Petroleos Mexicanos, which supplies the natural gas consumed at the plant free of charge. A further expansion of production will be realized if plans for a new large plant in the northern part of the country are carried out.

6. *The Sugar Industry*

A rapid rise in domestic demand without a corresponding increase in production caused sugar imports to increase greatly during the war. Between 1940 and 1945, consumption of white sugar rose on the average by 5.8% each year; if *piloncillo* (an unrefined brown loaf sugar) is included, the increase was 6.3%. While internal consumption was expanding, only minor additions to capacity could be made because of the scarcity of machinery, and the output of white sugar increased by an average of only 2.0% annually in this period. As a matter of fact, from 1942 to 1945, production of white sugar actually decreased, partly because of a considerable increase in the output of alcohol for export. However, the decline in white sugar production was partly offset by the availability of larger quantities of *piloncillo,* which brought the overall average increase in output up to 3.4% annually in 1940-1945.

Sugar had been an export commodity throughout most of the thirties, but it had to be imported in 1941 and from 1943 to 1946 as a result of the inability of production to satisfy growing domestic demand. In spite of higher imports, which were equivalent to over 20% of the volume of white sugar consumed in 1945 and 1946, there was a sugar shortage in the country (Table 88).

After the war, production increased much more rapidly than consumption.

Between 1947 and 1949, more sugar cane was planted, several new mills were established and some existing mills increased their capacity. As a result, production of white sugar rose by 9.6% annually in 1946-1950. This time the output of *piloncillo* remained almost stationary, lowering the increase in the total output of sugar to an average of 7.6% annually (Table 88). The increase in production not only sufficed to meet the rising internal demand of 3.4% in 1946-1950, but replaced imports completely. Stimulated by devaluation, exports began in 1948 and 1949, and between 20 and 30% of the white sugar produced in those years was exported. In 1950, however, exports almost vanished as a result of a poor harvest.

The sugar industry has been operating considerably below capacity since 1946, principally because of lack of sugar cane. The shortage of sugar cane is due to a variety of reasons, including the diversion of land to more remunerative crops, periodic droughts and the poor location of some sugar mills. On the other hand, small improvements in mill operations could increase yields from the cane, even though the industry's productivity is limited by the widespread use of antiquated equipment. Persons in a position to know have estimated that if such improvements could be made and if sufficient supplies of raw material were available, the industry's output could increase from the 590,000 metric tons produced in 1950 to 900,000 metric tons without expanding present capacity.

Because of climatic disadvantages as compared with the principal sugar-producing countries, Mexico cannot expect to become a permanent sugar exporter. Consequently, future expansion of the industry will depend mainly on the growth of the domestic market. The rise in sugar consumption between 1940 and 1950 was chiefly due to increases in population and in industrial use of sugar. The average rise in consumption per capita during these years amounted to 2.3% annually; however, in 1946-1950 it was only 0.5% annually (Table 88). If industrial use of sugar, as estimated by Nacional Financiera, is deducted from total consumption, per capita household consumption increased by only 1.1% annually in 1940-1950. On the assumption, however, that per capita consumption of sugar will increase during the next five years at an average annual rate of 2.3%, and population by 3.1% the domestic demand for sugar could rise by about 5.4% annually. Such a rate is close to that at which production expanded in the whole period 1940-1950, but considerably lower than the rate of 7.6% at which output expanded in the postwar period.

The National Union of Sugar Producers has announced that the industry will invest 150 million pesos from 1951 to 1955. The major part of the contemplated investment would be spent to increase production of sugar cane, but 60 million pesos would be used to improve and to enlarge sugar mills. According to this plan, production would reach 1 million metric tons in 1955, about 400,000 tons higher than in 1950. Such an expansion would involve an absolute and proportional increase in domestic consumption about twice as great as can be expected on the basis of experience in 1940-1950, and it therefore appears that the plan is based on the supposition that Mexico can become a regular exporter of sugar in competition with other sugar-producing countries.

7. *The Meat Packing Industry*

Plans for increasing the number of meat packing plants had already been prepared when the outbreak of foot-and-mouth disease in Mexico caused the United States to close the border to imports of Mexican live cattle at the end of 1946. Only four small meat-packing plants were operating at that time. Between 1947 and 1949, however, substantial investments were made in the industry with help from Nacional Financiera. In 1951 about 17 plants were in operation.

From its beginning, the industry directed its efforts toward exports and only a small part of its production has been for the domestic market. At first, virtually its entire output was purchased by E.C.A. for shipment to Europe. As a result, meat exports increased from 5,000 metric tons in 1947 to 62,000 metric tons in 1949. In 1950, however, E.C.A. purchases ceased and exports declined greatly. Although some frozen beef was sent to Europe in the latter part of 1950 after refrigerating equipment had been installed in the packing plants, 1950 meat exports were less than a third of those in 1949; in 1951, after the establishment of meat inspection service in the packing plants, the United States began importing Mexican meats and is now expected to become the principal market.

The capacity of the meat packing industry has been much greater than the supply of cattle. This has been partly due to the prolonged droughts in northern Mexico in recent years, which have reduced the number of cattle. The cattle shortage, which may be aggravated when the U. S. permits the resumption of live cattle imports from Mexico, is likely to be the main obstacle to future expansion of production.

C. GOVERNMENT'S ROLE IN INDUSTRIAL DEVELOPMENT

Private domestic investors have been the leading promoters of industrial development; the Government has mainly sought to establish a suitable climate for development, limiting its own direct investments and financial contributions to fields of crucial importance. This policy has undoubtedly helped to smooth the process of industrialization. It must be said, however, that the Government's policy has never been so broadly conceived or applied as to prevent seriously uneven development.

The promotion of industrial development has become an increasingly important part of the Government's economic policy. The Bank of Mexico has contributed to carrying out this policy with research and financial assistance. In the main, however, the policy has been carried out through (1) financial and technical support to industry, principally through the Nacional Financiera, (2) tariff protection, (3) tax exemptions, and (4) the encouragement of foreign investment in industry.

1. *Nacional Financiera*

The promotion of economic development first became an important objective of Nacional Financiera in 1941, when it began to sponsor projects designed to overcome wartime shortages in basic industries, such as iron and steel, pulp, caustic soda and rayon yarn. Scarcities of machinery, however, prevented Nacional Financiera's industrial investments from increasing rapidly until the end of the war. The years from 1946 to 1948 saw increasing industrial activity on the part of Nacional Financiera. Projects in the iron and steel, textile, pulp and paper, cement, electric and chemical industries conceived during the war, were completed in those years (Table 89).

In 1949 and 1950, however, Nacional Financiera shifted its primary attention from the promotion of new industries toward electric power, transportation and communications and the consolidation of established industries. In these years the fertilizer plant in Cuautitlan was the only new large industrial project aided by Nacional Financiera in addition to several small plants.

Data are lacking which would permit an accurate enumeration of Nacional Financiera's financial contributions to Mexico's industrial development. However, a comparison of the annual increases in Nacional Financiera's holdings of industrial stocks and loans to industry with the Combined Mexican Working Party's estimates of total investments in industrial machinery and equipment give an indication of Nacional Financiera's role in financing industrial progress. On the basis of these data, Nacional Financiera's net contribution to the industrial sector between 1946 and 1950 fluctuated from a low of 3.4% in 1946 to a high of 9.0% in 1947, averaging 6.9% for the period as a whole (Table 89). However, the total investment of the enterprises aided by Nacional Financiera would be a higher proportion of overall industrial investment, if account were taken of industry's repayments to Nacional Financiera and the fact that the agency's financial assistance probably amounts to less than half the total investment in the enterprises concerned.

Even if due consideration is given to these omissions, it must be concluded that the Nacional Financiera's contribution to Mexico's industrial development has not been very large in purely financial terms. Nevertheless, by concentrating its investments and technical assistance in areas where serious shortages of supply or capital existed, Nacional Financiera was able to eliminate some important obstructions to industrial development. In this category belong the financing of the Altos Hornos plant and of several cement factories which alleviated shortages of iron, steel and cement seriously hampering private and public investment. In addition, the Atenquique pulp and paper mill, the two rayon yarn mills, and several chemical factories financed by the Nacional Financiera, provided the means of eliminating shortages of raw materials which prevented efficient utilization of capital equipment as well as further development of industry. When, immediately after the war, imports of sugar were absorbing increasing amounts of foreign exchange, Nacional Financiera made considerable investments to increase the capacity of the sugar industry. Nacional Financiera also came to the aid of livestock farming by supporting the creation of a meat packing industry when the U. S. embargo on live cattle eliminated the established market for cattle raisers in the north. Finally, the fertilizer plant at Cuautitlan provides important possibilities for improving Mexican agriculture.

It may be concluded, therefore, that within the limits of its major objective to relieve some of the more obvious bottlenecks interfering with the progress or stability of the economy, the efforts of Nacional Financiera have been successful. If its objectives have been too limited, or its efforts insufficient to prevent the emergence of grave distortions within the developing economy, these shortcomings can hardly be laid at the door of Nacional Financiera. In the absence of a general government policy for balanced economic development, Nacional Financiera has achieved the best results which could be expected.

In order to carry out its objectives most expeditiously, Nacional Financiera has found it necessary to concentrate on the promotion of large industrial enterprises. In 1949 and 1950, for example, 14 large industrial units only accounted for nearly 80% of Nacional Financiera's total industrial investments and loans to industry. While this policy was useful in eliminating bottlenecks quickly, it has left for future solution the problem of providing financial and technical aid to small industrial firms in Mexico.

2. *Tariff Policy*

Since the early forties, the tariff has been used increasingly by the Government as an instrument for promoting industrial development. It would be difficult to determine the extent to which the tariff has succeeded in the aggregate in stimulating industrial development. There is no doubt that tariffs have stimulated some branches of industry. However, they have not been applied as part of a considered policy of industrialization, nor have they been fixed at the levels best calculated to encourage the expansion of industry. Consequently, they sometimes have had the effect of retarding development. In the textile industry, for example, the tariff has had the effect of perpetuating high costs and low value. Whenever high tariff protection was granted to industries which for the time being could not fulfill the requirements of the domestic market, the resulting bottlenecks of supply or high prices interfered with the development of other industries.

Although the introduction of import restrictions in 1947 was based on other considerations, these measures have had important effects in promoting industrial development. As with tariffs, however, no estimate of their effects is possible. It is noteworthy, however, that the removal of import restrictions has usually been accompanied by increases in tariff protection, sometimes to prohibitive levels.

3. *Tax Exemptions*

Tax exemptions became an important part of the Government's industrial development policy in 1941. In that year, a law was enacted authorizing tax concession for a period of five years to new industries and to industries deemed necessary for the development of domestic manufacturing. In 1946, this law was replaced by one which established three categories of industries to which tax concessions could be granted and also extended the duration of the concession period to ten years. In addition to exemptions from all the principal federal taxes, the law also authorized tariff concessions on imported equipment and on the raw materials needed to start operations.

It is not possible to give a conclusive statement on the effect which tax concessions have had in advancing industrial development. Nevertheless, it is doubtful whether these concessions have had much effect in increasing investment in industry. Mexican taxes are low, even in the case of duties on capital goods and raw materials, and savings due to the exemptions could hardly compensate for the risks involved in starting new enterprises. While it is true that many firms have availed themselves of the benefits to which they were entitled under the law, the extent to which such firms were motivated by tax concessions in making their investments is debatable.

Under the law, tax exemptions granted to a new enterprise or to an established concern which expands, are automatically applicable to all other firms in the same industry even if they have been in existence for many years and are making no new investments. Moreover, there is nothing in the law which would prevent an established firm which is planning no new investment from applying and obtaining tax exemptions. No information is available which would reveal the extent of such concessions to industry. In recent years, attempts to maintain tax revenues have in most cases limited the application of the law's benefits to new enterprises and to existing firms which expand their operations. Nevertheless, a tendency persists for tax exemption policy to deviate from its original purpose of promoting new industrial investments both by giving general subsidies to industry and by extending these benefits for five more years beyond the five-year period originally contemplated by the law of 1941. In spite of a requirement of the 1946 law, no grouping has ever been made of industries entitled to tax concessions because of their importance to Mexico's industrial growth. Except for excluding assembly plants from the law's benefits by an administrative ruling, no attempt has been made to use tax concessions to influence the direction of industrial expansion.

If tax concessions are continued as an instrument of official policy for stimulating industrial development, further study is required to devise measures which would constitute the most effective inducements toward new industrial investment without providing a more or less general and permanent subsidization of industry.

In addition to tax concessions available to industry under federal legislation, many states as well as the Federal District try to attract industry by granting exemptions from local taxation. These taxes, which are generally unimportant, are unlikely to outweigh such factors as markets, power, water and transportation in determining the location of industry. These factors have been responsible for the concentration of Mexican industry in a few regions, in particular the Federal District. However, the inadequacy of public facilities, which can only be expanded at high cost in some cases, is beginning to impede industrial development in these regions. It is desirable that studies should be made which would serve as the basis for a policy of regionally-balanced industrial location.

4. *Encouragement of Foreign Industrial Investment*

Official statements welcoming foreign investment in industry and cooperation between foreign and Mexican capital in industrial enterprises have been frequent in recent years. The Government has shown its desire to encourage foreign industrial investment by permitting the establishment of enterprises with a majority of foreign ownership except in a few branches of industry. In addition, Nacional Financiera has lent financial support to several enterprises in which foreign capital has participated.

During the war and postwar periods, industry has become the principal field for new foreign direct investment in Mexico. In 1939 and 1940, foreign direct investments in industry averaged only $0.9 million (4.7 million pesos) annually or 30% of total foreign investments; in 1941-1944, the average increased to $4.0 million (19.3 million pesos) and 36% of the total; in 1945-1949 it rose to $13.2 million (75.7 million pesos) and 59% of the total (Table 79).

In spite of the marked advance, however, foreign investment remains a minor source of industrial investment in Mexico. In 1939-1940, such investments constituted 3% of the total investment in industrial machinery and equipment. During the war (1941-1945) this ratio increased to an average of 10%, but since the war, foreign investment has increased less than domestic investment, and amounted to no more than 7% of total industrial investment in 1946-1949 (Table 79).

It would be incorrect, however, to evaluate the importance of foreign participation in Mexican industrial development solely on the basis of its financial contribution. It is in the area of technical and administrative services rather than in that of finance that foreign participation has been most fruitful for Mexican industry.

D. PROSPECTS OF INDUSTRIAL DEVELOPMENT

A review of Mexican industrial development between 1939 and 1950 indicates that conditions generated by the last war were primarily responsible for the course of industrial investment and production during those years. After wartime conditions had by 1948 largely disappeared, increased tariffs, import restrictions and devaluation induced a further rise of industrial output in 1949 and 1950. Industrial development in 1939-1950 was also stimulated by incompletely utilized public facilities, such as the railroads, power, water and sewerage. However, towards the end of the war, the use of most public facilities approached capacity.

For its long-term development, Mexican industry can hardly rely on domestic and export markets created by wartime scarcities of goods or on temporary official measures like those taken in 1948 and 1949. The future of Mexico's industry will depend on the expansion of the internal market and on the possibilities of substituting domestic for imported manufactures. In these circumstances, the main obstacles to industrial development lie in the small size of the domestic market, inefficiencies in manufacturing and distribution, inadequate public facilities and the misdirection of industrial investment with consequent surplus capacity.

Even if the spectacular wartime and post-devaluation increases in industrial production are recognized as abnormal, it would not be unreasonable to expect a continuation of the 8% annual average increase in output which took place in the 1939-1950 period. Such expansion would be possible if real domestic product continued to increase at an annual level no higher than the 6% which prevailed in 1946-1950, if advantage were taken of opportunities for substituting domestic for imported manufactures, and if public facilities are expanded sufficiently.

An 8% annual increase in industrial production would eventually require an increase in the total capacity of industry. Nevertheless, much could be done to raise output by more effective use of available capital equipment and by relatively small investments to eliminate bottlenecks. Experience shows that the financing of new investments in industry will probably come for the most part from private domestic sources with lesser contributions from official agencies and foreign private capital. The results to be obtained from these new investments will depend to a considerable extent on the appropriateness of their composition and their harmoniousness with the composition of investment in the other sectors of the economy.

CHAPTER VII

Transportation and Communications

A. PATTERN OF INVESTMENT IN 1939-1950

In the past 25 years a fundamental change has taken place in the Mexican transportation system. In 1925, highways were few and the railroads were the chief means of moving people and goods. Over the last quarter of a century, however, there has been a vast expansion of the highway system. On the other hand, the railroad network has shown little change and its stationary and rolling equipment has deteriorated steadily.

Transportation was one of the principal fields of investment in the 1939-1950 period, although its share in gross domestic investment fell from an average of 33% in 1939-1944 to 27% in 1945-1950 (Chart 14). Most of this decline was due to a lower rate of increase in railroad investment than in other major public investment sectors. As a consequence, the share of transportation investment in total public investment declined from an average of 57% in 1939-1944 to 45% in 1945-1950; in contrast, private transportation investment, mainly in automotive vehicles, remained constant at a level of 15% of total private investment (Table 90).

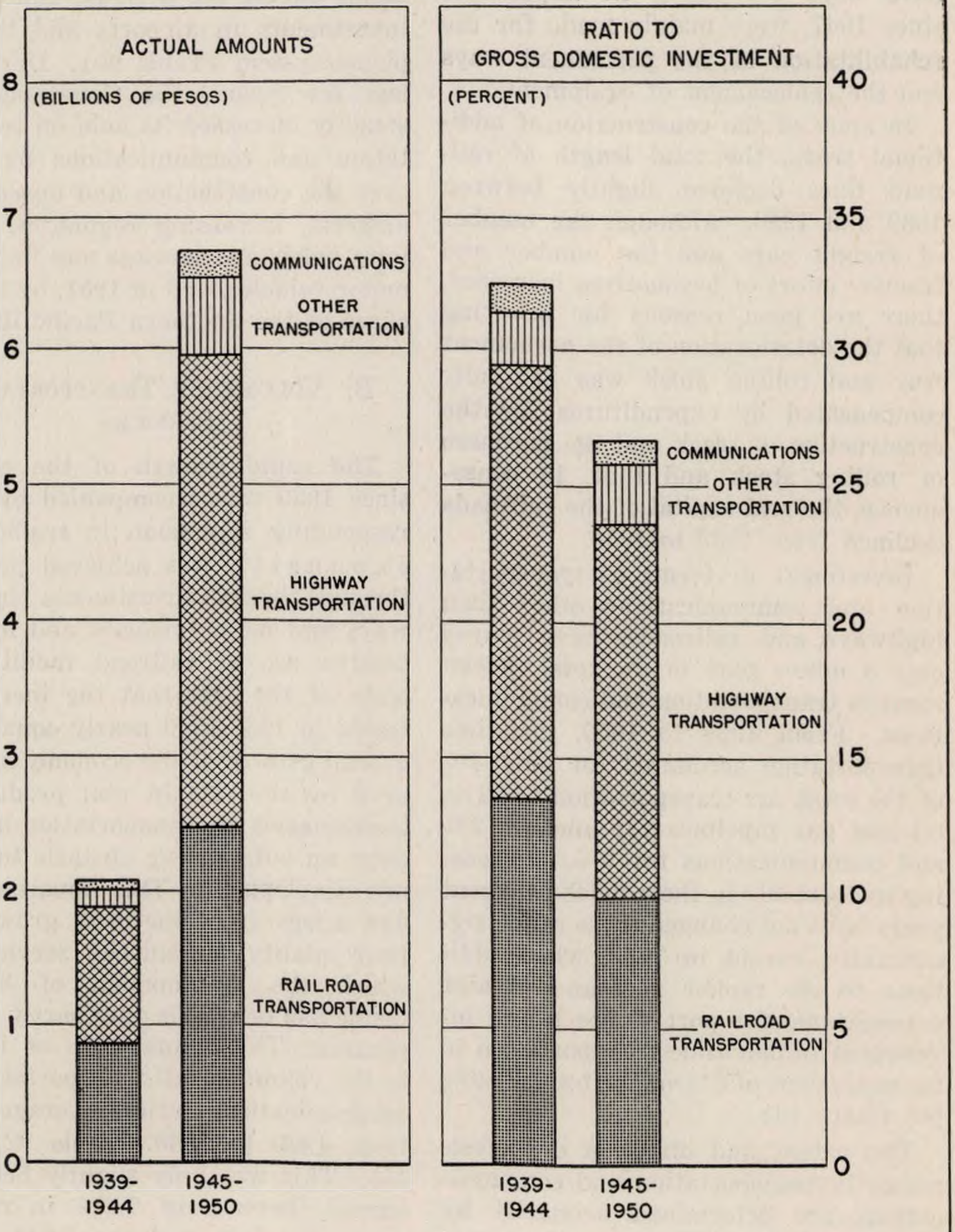
The growth and predominance of highways in Mexican transportation were reflected in the increasing proportion of expenditures for roads and motor vehicles in the total transportation investments. This proportion rose from 43% in 1939 to an average of 52% in 1945-1950. During the same years, the ratio of railroad investment to total transportation investment was declining from 46% in 1939 to an average of 37% in 1945-1950 (Table 90, Chart 14).

These figures reveal only incompletely the importance of highway transportation. A fuller appreciation of the dynamic role of automotive transportation, and the static part played by the railroads in Mexico's transportation development, can be obtained from the character of the investments in each of these categories. There are no accurate data showing the importance of capital additions as compared with maintenance, repairs and replacements. Nevertheless, existing information indicates that most investments in highways and motor vehicles added to real capital, while railroad investments were made for maintenance, repairs and the replacement of worn-out equipment. Thus, 76% of the investments in highways and motor vehicles from 1939 to 1950 were for expansion and improvement of roads and for the acquisition of motor vehicles (most of which increased the number of vehicles in operation). The cost of maintaining roads accounted for 8% of the total investment in highways and vehicles and the cost of maintaining and repairing vehicles was equivalent to 16%. On the other hand, 66% of the investment in railroads during this period was spent for maintenance

CHART 14

INVESTMENT IN TRANSPORTATION AND COMMUNICATIONS

TOTALS FOR 1939-1944 AND 1945-1950



SOURCE: Combined Mexican Working Party.

No. 638

and repairs. The remaining 34% was used to construct tracks and roadbeds and to acquire rolling stock (Table 90). However, these expenditures, which have been increasing in importance since 1947, were mainly made for the rehabilitation of the permanent ways and the replacement of equipment.

In spite of the construction of additional track, the total length of railroad lines declined slightly between 1939 and 1950. Although the number of freight cars and the number and tractive effort of locomotives increased, there are good reasons for believing that the deterioration of the permanent way and rolling stock was not fully compensated by expenditures for the construction of track and the purchase of rolling stock and that, in consequence, the real capital of the railroads declined from 1939 to 1950.

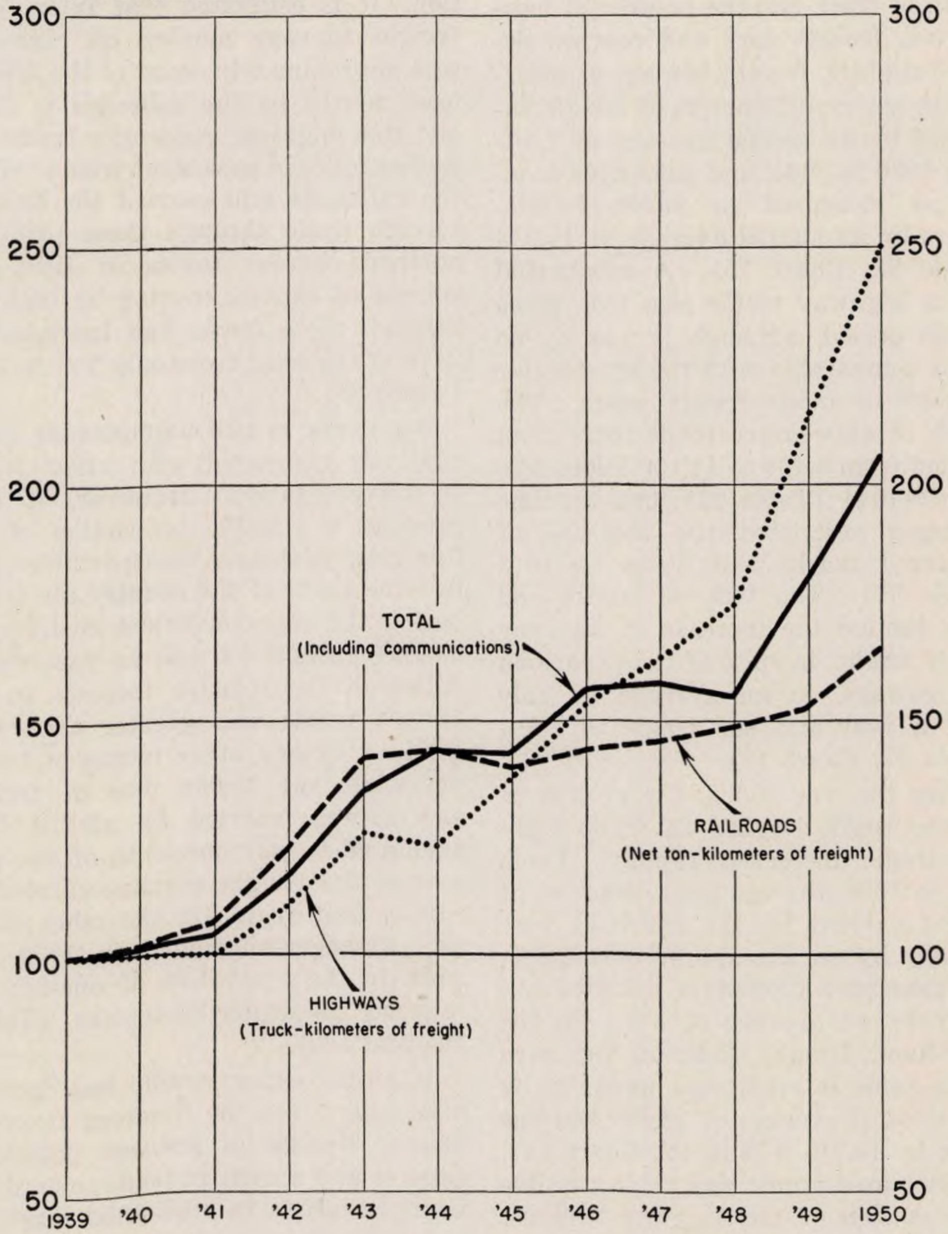
Investment in forms of transportation and communications other than highways and railroads, have played only a minor part in the total investment in transportation and communications. From 1939 to 1950, maritime transportation accounted for only 4% of the total, air transportation for 2%, oil and gas pipelines for another 2% and communications for 3%. Increasing investments in these fields in recent years have not changed these ratios significantly, except in 1950, when additions to the tanker fleet and greater expenditures for port works raised investment in maritime transportation to the equivalent of 8% of the total (Table 90, Chart 14).

The extent and direction of investments in transportation and communications are determined primarily by the Federal Government and its agencies. Private investment, which was equivalent to 32% of the total in 1939-1950, has been limited to motor vehicles, aviation equipment, maintenance of the Southern Pacific Railroad (the only important railroad in private hands during the period), and to some investments in airports and the telephone system (Table 90). During the last few years, the Government has steadily increased its hold on transportation and communications by taking over the construction and operation of airports, increasing regulation of airlines, telephone services and imports of motor vehicles, and in 1951, by the purchase of the Southern Pacific Railroad.

B. VOLUME OF TRANSPORTATION SERVICES

The rapid growth of the economy since 1939 was accompanied by a corresponding expansion in traffic. This expansion was achieved primarily through heavy investments in highways and motor vehicles and more intensive use of railroad facilities. In spite of the fact that the increase in traffic in 1939-1950 nearly equalled the overall growth of the economy as measured by the rise in real product, the inadequacies of transportation have become an outstanding obstacle to economic development. This apparent paradox arises from the slow growth and poor quality of railroad services, for which the development of highway traffic has been able only partly to compensate. The annual rate of increase in the volume of all transportation and communication services averaged 6.8% from 1940 to 1950 (Table 92, Chart 15). This was only slightly below the annual increase of 7.2% in real domestic product and the 7.8% annual rise in industrial production over the same period.

CHART 15



VOLUME OF TRANSPORTATION: TOTAL, HIGHWAYS, AND RAILROADS

(INDEX, 1939 = 100)

SOURCE: Combined Mexican Working Party on the basis of information from the Ministry of Communications and Public Works, the National Railways, the Dirección General de Estadística, and the Nacional Financiera.

No. 639

The increase in traffic during the war years from 1940 to 1944 was achieved mainly by more intensive use of railroad equipment. Although the total length of track and the number of locomotives, freight cars and coaches declined slightly, freight haulage as measured in net ton-kilometers of freight increased by an annual average of 7.5% from 1939 to 1944, and passenger haulage as measured in passenger-kilometers by an annual average of 14.9% (Table 92, Chart 15). A substantial rise in highway traffic also took place in this period, although it was by no means comparable with the spectacular increase in more recent years. The length of all-weather roads more than doubled from 6,400 to 14,100 kilometers in 1939-1944 (Table 93), but wartime shortages restricted the increase of registered trucks and buses to 40% (Table 94). The lack of trucks and buses limited the increase in highway freight traffic, in spite of the expansion in highways, to an average of only 4.2% a year and bus traffic to 4.6% (Table 92, Chart 15).

After the war ended, the growth of railroad traffic levelled off while highway traffic increased rapidly. From 1944 to 1950, the net ton-kilometers of freight carried by the railroads rose annually by an average of only 2.3%, and passenger-kilometers declined annually by an average of 3%. On the other hand, freight traffic on highways in the same interval rose annually by an estimated average of 12.6% and bus traffic by 13.7% (Table 92, Chart 15). The increased traffic was made possible by expansion of the highway network from 14,100 kilometers of all-weather roads in 1944 to 22,300 kilometers in 1950, and by a 90% rise in the number of registered trucks and buses in the same period (Tables 93 and 94). These advances have brought about a fundamental shift in the relative importance of highway and railroad transportation. It is estimated that inter-urban freight tonnage moving on highways was approximately equal to the freight load carried by the railroads in 1950, and that highway passenger traffic exceeded railroad passenger traffic.[1] While the railroads still carried the bulk of foreign trade through three principal northern border towns in 1950, the volume of exports moving by highway through these towns had increased to 34% of the total from only 7% in 1941 (Table 96).

Air traffic is still unimportant quantitatively compared with other forms of transportation. However, it now provides a sizeable proportion of the first-class passenger transportation, and in some parts of the country air transport is the only convenient medium for moving freight as well as passengers. Although the relative increase in air freight traffic was greater than that attained by any other means of transportation, the 35,000 tons of freight and express carried by air in 1950 amounted to only one-tenth of one percent of the freight tonnage carried by rail in that year. On the other hand, air passenger-kilometers in 1950 had risen to the equivalent of one-fifth of railroad passenger-kilometers (Tables 104 and 102).

Maritime export traffic has declined materially since the nineteen twenties, mainly because of reduced petroleum exports and a shift in trade toward the United States. In 1945-1950 maritime export traffic was only 30% of the 1925-1929 average. In contrast, maritime

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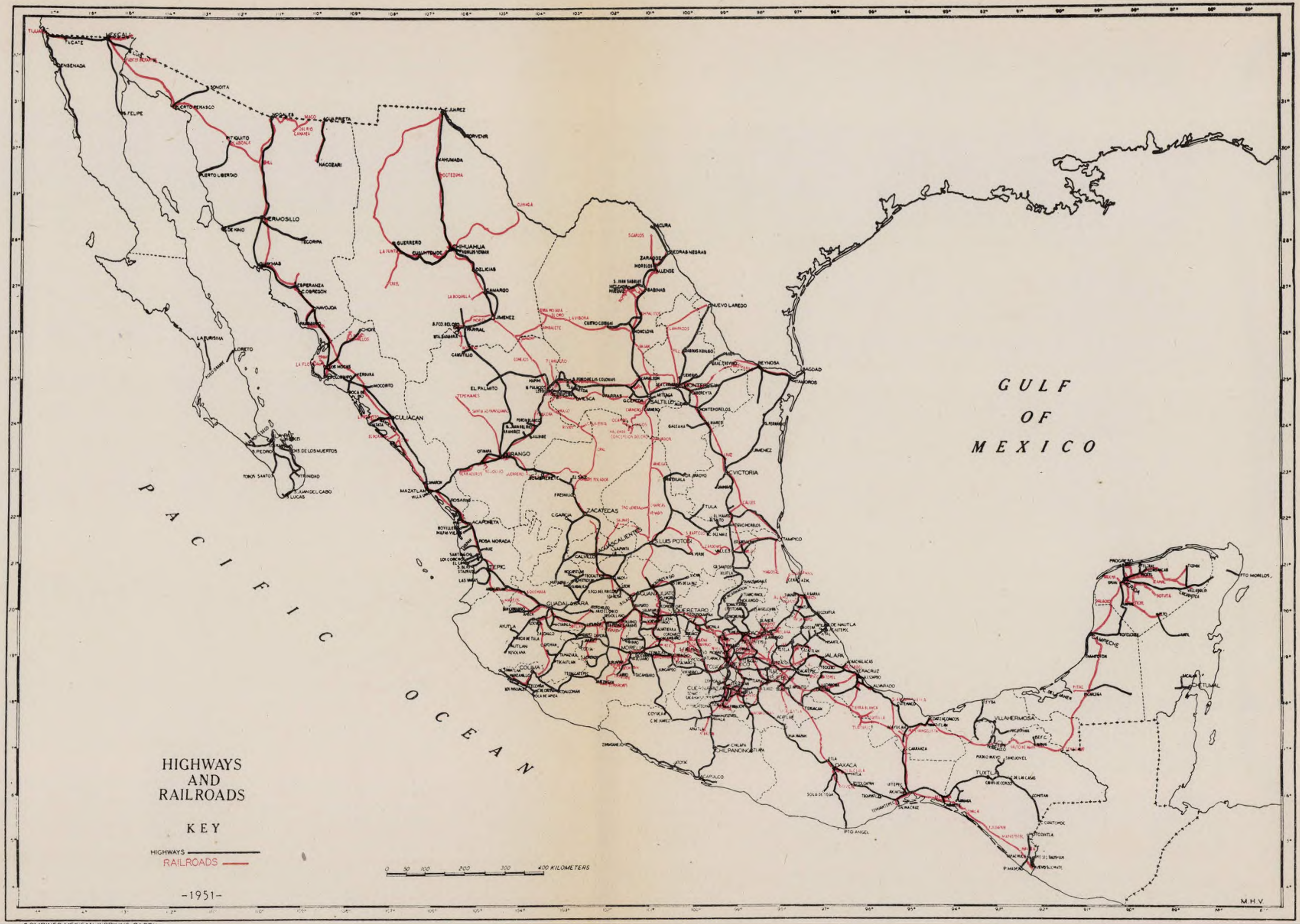
[1] Report of the Export-Import Bank on the Mexican Railroads, 1951.


GULF OF MEXICO
PACIFIC OCEAN
TIJUANA
TECATE
MEXICALI
ENSENADA
SONOITA
PUERTO PEÑASCO
S. FELIPE
NOGALES
AGUA PRIETA
NACOZARI
C. JUAREZ
PORVENIR
AHUMADA
PUERTO LIBERTAD
HERMOSILLO
TECORIPA
GUAYMAS
ESPERANZA
C. OBREGON
NAVOJOA
GUERRERO
CUAUHTEMOC
CHIHUAHUA
DELICIAS
CAMARGO
JIMENEZ
PARRAL
LORETO
LA PURISIMA
CULIACAN
EL PALMITO
DURANGO
MAZATLAN
TODOS SANTOS
S. JUAN DEL CABO
PIEDRAS NEGRAS
NUEVO LAREDO
MONCLOVA
MONTERREY
SALTILLO
REYNOSA
MATAMOROS
C. VICTORIA
ZACATECAS
FRESNILLO
S. LUIS POTOSI
AGUASCALIENTES
TAMPICO
TEPIC
GUADALAJARA
GUANAJUATO
QUERETARO
COLIMA
MORELIA
JALAPA
VERACRUZ
ALVARADO
CUERNAVACA
CHILPANCINGO
ACAPULCO
OAXACA
PTO ANGEL
TUXTLA
VILLAHERMOSA
CAMPECHE
PROGRESO
PTO MORELOS
CHETUMAL
0 50 100 200 300 400 KILOMETERS
M.H.V.

HIGHWAYS AND RAILROADS

KEY

HIGHWAYS ——

RAILROADS ——

-1951-

COMBINED MEXICAN WORKING PARTY

import freight traffic recovered after the wartime recession to a level in 1950 somewhat above the 1925-1929 average. Coastal shipping has increased steadily, but remains unimportant. Although total freight handled at ports since 1945 has risen from the low wartime levels to exceed the prewar volume, the average volume of freight moving through ports in 1945-1950 was barely more than one-half the 1925-1929 average (Tables 106 and 107).

The most rapid development of traffic has taken place in the northern, western and northwestern parts of the country, regions which also experienced considerable agricultural and industrial growth. In these areas, the amount of freight carried increased between 1941 and 1950 for every type of conveyance. On the other hand, in the Gulf region and in the south and southeastern parts of the country, there has been substitution of highway, airline and pipeline for railroad and sea transportation rather than overall expansion.

C. The Railroad Problem

The present state of Mexico's railroads is the result of a process of decline which began during the prolonged period of civil strife after 1910. The progressive deterioration of plant and equipment has lowered the efficiency of both administration and labor. On the other hand, the time has long since passed when expenditures for physical rehabilitation alone could solve the railroad problem. No remedial action can be effective unless it includes overhauling of administration and certain changes in labor attitudes. Deterred by the intricacies of the problem and the hazards involved in solving it, the Government concentrated on the development of highways. As the highway system expanded, however, competition from road traffic increased the financial predicament of the railroads. The total impact of these conditions intensified the railroads' plight and their operating efficiency fell until they became a serious impediment to further economic development. Rehabilitation work has begun in recent years, but neither the scale of the effort nor the amount of attention to administrative problems promises to bring more than partial relief of the railroad situation in the near future.

The Mexican railway system acquired its present form and size several decades ago. The main railroad network in the central area of the country is connected by two trunk lines with the northern border, and by one line passing the Isthmus of Tehuantepec to the southern border. These lines are joined by transverse lines to the Mexican Gulf ports of Matamoros, Tampico and Veracruz. The Gulf of California region is served by the Pacific Railroad, which extends from the northern border to Guadalajara, where it meets the central network. Except for a line between the port of Manzanillo and Guadalajara and another crossing the narrow Isthmus of Tehuantepec, there are no transverse connections between the Pacific Coast and the central area or the Mexican Gulf. The Lower California and Southeast Railroads are the only new lines completed since 1938. These lines, approximating 1,300 kilometers in total length, connect the peninsulas of Lower California and Yucatan with the main network. Since some of the older lines were abandoned while the new railroads were being built, the total length of track in 1950 (23,000 kilometers) was about the same as in 1938 (Table 100).

Although the track has remained almost unchanged in length, it has deteriorated steadily, because of the heavier loads carried during and since the war, and inadequate expenditures for maintenance and rehabilitation. According to a statement by its Managing Director, most of the roadbeds of the National Railroad were eroded in 1947, large numbers of ties were rotten and bridges were in poor repair. On many lines rails had not been replaced in 40 years. These conditions were largely responsible for a 21% decline in the speed of freight trains on the National Railroads between 1939 and 1950 (Table 101).

The deterioration has also extended to rolling stock. The total of 21,749 freight cars owned by all the railroads in 1950 was only slightly higher than the 21,055 owned in 1939 (Table 100). However, the small increase in the number of cars was more than offset by reductions in the number of cars in use and the efficiency with which they were utilized. According to the Export-Import Bank report on the Mexican railroads, 30% of the National Railroads' standard-gauge freight cars were immobilized on June 30, 1950 because they were either awaiting repairs or were being used as living quarters. In addition, the average annual number of freight car turn-arounds declined by 32% between 1939 and 1950, and the daily mileage traveled per freight car by 22% from 1939 to 1949.

To counteract the loss in the number and efficiency of freight cars in use, the National Railroads have relied increasingly on privately-owned cars and on the lease of foreign cars. In June 1950 such cars accounted for almost two-thirds of all standard-gauge cars in use. The widespread use of private freight cars has been forced upon shippers as a result of the lack of railroad freight cars. Since the owners of the cars do not receive compensatory reductions in shipping rates and the cars may not be used except by their owners, the system of private car ownership has proved to be a costly method of dealing with the freight car shortage for both owners and railroads. Similarly, the leasing of foreign freight cars, which exceeds normal levels, has been an expensive means of obtaining the use of freight cars.

The number of locomotives increased by 6% in 1939-1949 from 1,359 to 1,441. In addition, the average tractive effort per locomotive rose by 22% (Table 100). However, this average is misleading, since the rise is entirely due to new diesel locomotives which cannot exert their full tractive effort because of the condition of the permanent way. Most of the locomotives in use are antiquated, some are not serviceable, and others are being made obsolete by changeovers from narrow to standard-gauge track. The National Railroads estimated that in 1950, 54% of the number of locomotives it owned were more than 40 years old and 84% more than 20; that 10% were either not serviceable or not worth repairing and that 14% were narrow gauge.

In spite of the shortcomings, however, railroad traffic in 1950 was 65% higher than in 1939 and 15% higher than in 1944. While this increase is not insignificant, it was below the demand for railroad transportation which accompanied the development of the economy from 1939 to 1950.

The first significant effort to rehabilitate the railroads was made from 1943 to 1945, when 3,000 kilometers of trunk lines were improved by the replacement of defective rails and ties. This program, which also included the acquisition of new equipment and the rehabilitation of roundhouses and workshops, was financed in part by a U. S. Government grant of $6.6 million (32 million pesos) and was carried out in cooperation with the U. S. Railroad Mission in Mexico (Table 97).

In 1946-1947 the National Railroads initiated a new program which included the substitution of heavy for light rails, improvement of roadbeds, construction of side track, and the modernization of terminals, workshops, rolling stock and communications equipment. This program, which has been financed mostly by Federal Government subsidies and Export-Import Bank loans, is well under way. Rehabilitation of the Mexico-Laredo line was recently completed, and work is proceeding on other lines for which a $56 million (484 million pesos) loan was granted in 1951 by the Export-Import Bank.

Expenditures for rehabilitation by the National Railroads amounted to 266 million pesos in 1950; in each of the years 1951 and 1952, expenditures are estimated at 200 to 250 million. Including maintenance costs, which have ranged from 225 to 260 million pesos a year since 1947, gross investment by the National Railroads amounted to 523 million pesos in 1950, and is estimated at this level in 1951 and 1952 (Table 99).

The rehabilitation investments have been entirely limited to the National Railroads. Although other railway lines owned one-third of the total track in 1949, they have made practically no investments for rehabilitation. The most important of these lines, the Pacific Railroad, is in an advanced stage of decay and estimates of the cost of rehabilitating it range up to 500 million pesos.

The rehabilitation program of the National Railroads has already improved the railroads, and its benefits will be felt increasingly in the next few years. Nevertheless, its completion cannot be expected to transform the railroads into an efficiently-run enterprise in the absence of radical improvements in administration and organization, as well as increased investment. The Export-Import Bank experts reported that appreciable relief could be obtained from many of the difficulties harassing the railroads if administrative and operating procedures were revised. In the case of freight cars, for example, they estimated that efficient utilization of available cars after the current rehabilitation program for roadbeds, track and locomotives is completed, could have the effect of more than 11,000 new cars with a value of more than $50 million; conversely, without improved efficiency, additional cars could not be relied upon to end the freight-car shortage.

From 1946 to 1949, the revenues of the National Railroads were over 200 million pesos below the costs of operation and maintenance. The entire rehabilitation program had therefore to be financed partly by the Government (which also subsidized the railroad deficits) and partly by foreign loans. The financial situation improved in 1950, when the deficit was small, but there is no likelihood that in the next few years the National Railroads can contribute much from their operational revenues to their own rehabilitation (Table 99). However, the collection and sale of iron and steel scrap could yield a considerable sum (perhaps as much as 130 or 175 million pesos ($15 or $20 million)).

The railroad deficits would not be a matter of concern if they were, as they are in some countries, the result of low rates maintained as a matter of policy by the Government, which compensated the railroad for losses from the effects of a low rate policy. In Mexico, however, the deficits are the consequence of the poor physical condition and inadequate management of the railroads as much as of the official rate policy. In spite of government subsidies, financial difficulties have seriously hampered both operations and rehabilitation of the National Railroads.

The railroad financial crisis has been deepened since 1945 by increasing competition from highway traffic. Most of the main trunk lines are now paralleled by highways. Although rates for hauling freight by highway are about twice as high as railroad rates, the greater speed and efficiency of truck transportation more than compensate for the difference in the case of more valuable commodities. Railroad freight transportation has expanded slowly in postwar years and the use of railroads is being increasingly confined to low-rate goods like grain, minerals and forestry products. On the other hand, the highways have captured most of the transportation of valuable manufactures, even for long hauls. In the survey of the railroads made by a group from the Export-Import Bank in 1951 it was found that in all but one instance where an all-weather highway paralleling a railroad line had been completed since 1946, railroad freight traffic either levelled off or diminished the year the highway was put into service or in the year following (Table 103).

Pipelines also divert traffic from the railroads. Thus, railroad transportation of petroleum declined in 1950 when the Poza Rica-Salamanca pipeline was opened, in spite of the increase in the production and consumption of petroleum which occurred in that year. Similar results may be expected from the newly-constructed trans-Isthmian pipeline. Eventually, however, tank cars released when pipelines are placed in operation will be used to haul oil in other parts of the country.

The development of the highway system has achieved results which never could have been obtained by merely rehabilitating the railroads. There is little doubt, moreover, that in the long run, the highways and pipelines as well as the railroads they parallel will be needed to handle the growing volume of freight. On the other hand, highways and pipelines can substitute completely for railroads in only a few instances. At the present time freight is being moved by highway which could be better transported by rail if the conditions of the railroads were improved. Even in the present state of the railroads, the highways are unable to supplant the railroads for the shipment of bulky materials like coal, iron and steel, ore and grain. Under these circumstances, the concentration on highways to the extent that it resulted in neglect of the existing railroad lines was an inadequate solution to the transportation problem, which helped introduce disproportions in the economy where highways could not substitute for railroads.

In cases where the construction of highways could have been postponed had the railroads been rehabilitated, it was also a costly solution which diverted funds from other urgently needed investment. The question arises in the case of the Pacific Railroad, for example, whether it might not have been more prudent to rehabilitate the railroad and complement it with feeder roads before a parallel competing highway was constructed. A similar question could be asked of the Isthmus of Tehuantepec, where both a highway and an oil pipeline were built, while the railroad was permitted to deteriorate.

In spite of the poor condition of the existing railroads, the construction of several new railroads has been begun in the last two decades. In 1934, construction was started on the Southeast Railroad and, somewhat later, on the Sonora-Lower California Railroad. The first of these roads was completed in 1950 and the second in 1949. Because of a shortage of equipment and premature deterioration of the permanent way, service on these lines has been sub-standard. Moreover, their usefulness has been limited by the lack of feeder highways.

The construction of two more railroads was begun in 1947, one between Mexico City and the Mexican Gulf port of Tuxpan, the other from Durango, over exceedingly mountainous terrain, to Mazatlan on the Pacific Coast. When completed, the railroad to Tuxpan will be the shortest rail connection between Mexico City and the Mexican Gulf; the other will be the only east-to-west coastal railway connection in the northern part of the country. For some years, work has also been under way on two railroads from Chihuahua to the Pacific Coast. All these projects have been progressing slowly and will require many years to complete. Recently, still another railroad construction project was announced, to extend to Acapulco a narrow-gauge railway which now runs only halfway to the Pacific Coast from Mexico City.

The new Durango-Mazatlan railroad will parallel a highway now being built, and the Mexico-Tuxpan railroad will parallel a highway and an oil pipeline. In planning these railroads, inadequate consideration has been given to other means of transportation being developed on the same routes. Although more detailed study may reveal that the projected means of transportation could all eventually be employed productively, it is hard to see how they could all be needed simultaneously. A study of potential traffic on the Durango-Mazatlan route, made for the Government in 1948, concluded that it would be advisable to postpone construction of the railroad until it could be determined whether the highway would suffice.

D. Development of Highway Transportation

The highways have played a crucial part in the country's economic development since the nineteen thirties. The expansion and improvement of the highway network stimulated the extension of cultivation, the commercialization of agriculture and the growth of industrial markets. Thus, the increase in output of such export crops as cotton and winter vegetables, as well as the rise in the tourist trade, was made possible by highway development (Table 109).

Highway construction did not reach significant proportions until the nineteen thirties. At the end of 1938, there were only 6,428 kilometers of all-weather roads in Mexico, of which approximately one-half were paved. There was one trunk route going north and south and, except for a road connecting Mexico City with the Pacific and another with the Gulf coast, there were practically no transverse routes. From 1939 to 1950 an average of 1,300 kilometers of all-weather roads were added to the network every year. In 1951, 2,623 kilometers, double the average of the previous twelve years, were constructed, bringing the total all-weather roads up to 24,880 kilometers (Table 93).

Between 1939 and 1950, road construction included two large radiating trunk routes from Mexico City to the northern border. Except for an important part of the northwestern highway between Mazatlan and Guaymas, these roads have been completed. With the completion in 1950 of another trunk route between Mexico City and the Guatemalan border, the northern and southern borders of the country were connected for the first time. In the central region and in the Mexico-Puebla-Veracruz area a network of roads has been built extending to the main ports on the Mexican Gulf and the Pacific Coast. In the north, a transverse route has been developed from Matamoros on the Gulf of Mexico to Durango, and is being continued to Mazatlan on the Pacific Coast. In the south, another transverse route is under construction across the Isthmus of Tehuantepec. The three major highways from Mexico City to the northern border, the principal transverse roads and many of the branch roads all follow existing railroad routes. Highways also serve many areas which the railroads serve inadequately or not at all.

Current road construction includes the road from Mazatlan to Guaymas on the west coast, the transverse routes in the north and south from Durango to Mazatlan and from Manzanillo to Jiquilpan, and the one across the Isthmus of Tehuantepec. Several roads going north and south are also being constructed in the central area. The network from Mexico City cross-country is being improved by a new direct highway to Veracruz (completed in 1951) and a four-lane express highway to Cuernavaca, built with an eye on the tourist trade; the road is to be extended eventually to Acapulco. The Veracruz region is being connected with the trans-Isthmian highway and a road along the entire stretch of Lower California is under construction. Also planned are more trunk roads from the center to the north, new transverse sections, and feeder roads to the Pacific Coast highway and the Southeast Railroad. Finally, construction of farm-to-market roads is being accelerated. Even after this program is completed, only the central part of the country will have an adequate network of highways. In many other sections of the country, especially in the north, northwest, south and southeast, highway connections within regions or with other parts of the country will continue to be below satisfactory levels.

Most of the highways constructed between 1939 and 1951 have been main trunk lines, and the building of feeder roads has only just begun. The construction of farm-to-market roads was started on an organized basis in 1948 by the National Committee of Farm-to-Market Roads, an official agency established specifically for this purpose. From 1948 to 1951 almost 1,700 kilometers of all-weather farm-to-market roads were constructed. However, the investment in these roads represented only 4% of the total investment in road construction during this period (Table 93). Unlike the highways, which are financed mainly by the Federal Government, only one-third of the farm-to-market road construction costs are financed from this source. Of the remaining two-thirds, half is financed by state governments and half from private sources. Because of the reliance on private contributions, farm-to-market roads tend to be built in areas where such funds are available, although this may not always be in areas where the need is greatest. The construction of feeder roads in mining areas is important for future mining developments, but measures to promote their construction have been taken only in the last few years.

Since most of the highways have been completed only recently maintenance costs have been relatively small. For the period 1939-1950 as a whole, maintenance accounted for 14% of total highway investment; in 1951, it was only 10.5% (Table 90). As the roads grow older, however, increased amounts will have to be spent on maintenance. The diversion of heavy freight traffic from rail to roads promotes excessive wear of the highways. Some roads are already wearing rapidly and maintenance is deficient. State governments, responsible for making repairs on an important part of the road network, are unable to carry the financial burden.

While the number of automotive vehicles has increased greatly, they are mostly in poor condition. Registered automotive vehicles increased annually by an average of 7.3% from 142,500 in 1939 to 310,000 in 1950 (Table 94). Trucks showed the greatest comparative advance of any type of vehicle, increasing by 10.4% annually from 39,500 units in 1939 to 106,300 in 1949, while the number of passenger buses rose by only 5.0% per annum, from 10,000 in 1939 to 16,200 in 1949. In general, maintenance of vehicles is inadequate but trucks and buses in dilapidated condition are commonly kept in service for as long as 10 to 15 years. According to one reliable estimate, 70% of all registered trucks and buses in 1949 were overdue for replacement. Although maintenance has been inadequate, the gross investment in repairs and in increasing the number of cars has been substantial, exceeding 400 million pesos in 1950 (Table 94). It has been estimated that the preservation of the existing number of trucks and buses (without replacing worn out units) would require about 10,000 new units each year at an estimated investment of 300 million pesos at 1951 prices.

Official policy has encouraged the establishment of assembly plants for automobiles within the country and except for special models, imports of assembled vehicles were prohibited in 1947; in more recent years, they have been discouraged by almost prohibitive tariffs. However, the assembly plants have worked below capacity, partly because of restrictions on the import of automotive parts between 1947 and 1950, and their costs of production are well above those in the United States. The construction of a plant, partly foreign owned, for assembling diesel trucks and manufacturing some of the parts, is currently being planned.

E. OTHER TRANSPORTATION

In recent years, a considerable effort has been made to increase the capacity and to improve the condition of Mexican ports. The annual investment in ports rose from only 3 million pesos in 1939 to 30 to 40 million pesos a year in 1948-1949 and to 84 million pesos in 1950 (Table 90). Although much of this expenditure has been on the important ports of Tampico, Veracruz and Manzanillo, they are still in unsatisfactory condition and loading is costly and slow. Nevertheless, work has started on the expansion of many other ports, including Coatzacoalcos, Progreso, Alvaro Obregon, Salina Cruz, Acapulco and Mazatlan. Many of these ports have little sea traffic, either because of their location or because they lack adequate connection with their hinterlands. The direction and dispersion of these investments, as well as the lack of either adequate technical planning or coordinated development of transportation facilities between the ports and their hinterlands, have greatly limited the results obtained from the port rehabilitation and expansion program.

The Mexican merchant marine is composed principally of the tanker fleet of Petroleos Mexicanos (Pemex), which grew from 39,000 tons in 1939 to 162,000 tons in 1950. The tonnage of other merchant shipping, mainly coastal vessels, did not increase significantly between the early forties and 1949, when it amounted to only 44,000 tons (Table 108). Existing labor regulations raise costs of operation and hamper expansion. In any case, maritime traffic is of only minor importance to Mexico and the frequent emphasis given to the desirability of acquiring a large merchant marine appears to be out of all proportion to both the level of maritime traffic and the more urgent needs in other fields of transportation.

The construction of airports was originally begun by private airlines. However, in order to insure more balanced development of air traffic throughout the country and to strengthen the financial position of domestic airlines, the Government began a program of airport construction and improvement in 1947. In 1949 and 1950, official investments in airports exceeded 20 million pesos each year, while investments by the airlines in this category dropped to insignificant amounts (Table 104). Several new airports have been built in recent years and the airport in Mexico City is being improved. In 1951 there was a total of 15 airports with adequate installations in addition to 365 registered landing fields in the country.

F. Development of Communications

The capacity of both telegraphic and telephonic communications installations increased slowly before the war. During and after the war, the requirements of economic development led to a considerable rise in the volume of communication services. In the absence of significant investment, however, an increasing volume of services was obtained by a lowering of quality. In 1947 the Federal Government started a program of modernization and expansion of the communications system which has already led to a marked improvement of telegraphic services. In the field of telephonic services, however, progress has been hampered by organizational and financial difficulties. Federal investments in telegraph lines and equipment, radio stations and maintenance of the telegraph system averaged 10 million pesos annually in 1948-1951 compared with an annual average of 1.5 million in 1939-1947. Between 1948 and 1950 the capacity of telegraph stations was increased, and telegraph lines were lengthened by over 10,000 kilometers; a similar increase in telegraph lines is expected in 1951-1952 (Table 110).

Investments for improving and expanding the telephone system increased significantly from an annual average of

11 million pesos in 1939-1946 to 39 million pesos in 1947-1950. Between 1947 and 1949, the number of telephones increased by an average of 7% annually compared with only 4% in 1940-1946 (Table 111). Nevertheless, these increases have been insufficient to keep up with the rising demand for telephone service in the cities, where systems are universally overloaded.

In 1950, the two private telephone companies were consolidated and a basis was thereby established for carrying out a long-range investment program to improve telephonic communication within the country. However, difficulties in linking the two systems and lack of funds have prevented the announced investment program from being put into effect. The program, which would involve increasing the number of telephones from 268,000 in 1949 to 415,000 in 1956 and lengthening long-distance lines by approximately 50%, would cost nearly 500 million pesos.

G. GOVERNMENT POLICY

In few sectors of the Mexican economy have Government investment and influence been as prominent as in the field of transportation. All the important railroads are now owned and operated by official agencies and the construction of highways, harbors and airports is almost exclusively the prerogative of the Federal Government. Nonetheless, it is difficult to detect any clear overall policy in the field of transportation. Nor has any real attempt been made to attain a reasonable level of coordination among the ministries and agencies concerned with the development and operation of transportation facilities.

The promotion of highway development stands out as the principal element of Government transportation policy over the last twenty years. However, highway development could not be expected to compensate for the deficiencies of the railroads, and has sometimes resulted in a duplication of services which would have been uncalled for if the railroads had been rehabilitated. Moreover, the construction of feeder roads essential to optimum utilization of trunk highways and railroad lines has only just begun to receive attention. In spite of the fact that existing railroads are in poor condition, the building of new railroads has not been abandoned, and those completed in recent years have fallen into a state of decay in a short period. When significant measures were taken to rehabilitate the physical facilities of the railroads, little was done to attack the administrative and other institutional aspects of the problem without which no real solution for the railroads is possible. Finally, port works have been undertaken in large number, with little consideration of either their relative importance or of the development of the hinterland transportation needed to make them economically productive.

There are regions of the country where inadequate transportation facilities prevent the use of potentially important natural resources. However, efforts to improve connections with these areas, as in the case of the route for the Durango-Mazatlan railroad, sometimes appear to have been made without careful consideration of the requirements for developing the resources. There have also been cases of unnecessary duplication of effort through simultaneous construction of railroads, highways and pipelines.

The conclusion seems unavoidable that there is an urgent need for an overall policy and for the coordination of government transportation agencies. These are primary requisites if serious waste of resources is to be avoided in the further development of transportation facilities and if the railroads are to cease to be a major impediment to economic growth.

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CHAPTER VIII

Education, Public Health and Welfare

A. INVESTMENT

Unlike government investments for economic development, investments for education, public health and welfare have occupied a relatively modest position in Mexican public investment. During the period 1939-1950, such investments, municipal works, hospitals, schools and low-cost housing, accounted for a largely constant proportion of 12% of total public investment. According to preliminary data, this ratio increased to 14% in 1951, but only because of heavy disbursements for the University City of Mexico (Table 20). Not included in these figures for lack of information are the investments of State governments and municipalities (except those of the Federal District) for educational, public health and welfare purposes. However, these investments are only a minor portion of the total investment in these fields.

Municipal works, including water supply and sewerage, the building of slaughter houses and markets, and the paving of streets accounted for 79% of the investments for education, public health and welfare purposes in 1939-1946 and 67% in 1947-1950 (Tables 19 and 20). Because of the limited financial resources of State governments and municipalities, most of these works were undertaken or financed by agencies of the Federal Government. More than half of these investments (approximately 56% for the entire period 1939-1950) were made to construct municipal works in Mexico City, including the Lerma water-supply system by which water is brought to the City from a source 80 kilometers away (Table 18). In spite of the substantial investments which have already been made, the City's water supply and distribution is still inadequate and will require substantial further expenditures. A large expenditure will also be required to renovate and expand the Mexico City sewerage system, which cannot handle the City's sewage disposal, particularly in the rainy season.

Since 1946, responsibility for the construction of hospitals has been transferred from the Ministry of Health and Public Welfare to the Social Security Institute and to the States, which construct hospitals with the aid of the Federal Government. Investments in hospitals accounted for only a small proportion of total public investment from 1939 to 1950, usually not exceeding 2% of the total and showing no perceptible tendency to increase (Table 20).

As in the case of hospitals, construction of schools has taken a minor share of total public investment, accounting for a little more than 1% of the total between 1939 and 1950. However, the amount spent in constructing schools does not give the full measure of expansion of school facilities, since rented or purchased buildings are frequently used.

In 1951 investment in school construction increased considerably, raising the share of education in total public investment to over 3%. The increase was entirely due, however, to an expenditure of 87 million pesos for the University City and a substantial portion of this amount was allocated to a large sports area and stadium. Expenditures for the construction of schools other than University City declined from 24 million pesos in 1947 to 15 million pesos in 1951. Included in the 15 million pesos were 8 million pesos for another large project for advanced education, the Polytechnic City, and 3 million pesos for other technical institutes. Thus, only 4 million pesos were available in 1951 for the construction of all other kinds of schools.

Before 1947, government agencies did not engage in the construction of low-cost housing projects on a significant scale, although two official agencies, the General Office for Civil and Retirement Pensions and the National Mortgage and Public Works Bank made loans for residential construction. Since 1947, these agencies and, to a lesser extent, the Social Security Institute, have undertaken several low-cost housing projects, mainly in Mexico City. Plans are being made by these agencies to expand their activities in this field. In 1950 and 1951, when over 30 million pesos were invested in housing by the three agencies, the share of residential construction in total public investment was over 1% (Tables 19 and 20). The projects undertaken thus far have been designed mainly for government employees and other sections of the middle-class, and beginnings have just been made to develop low-cost housing for industrial or other workers.

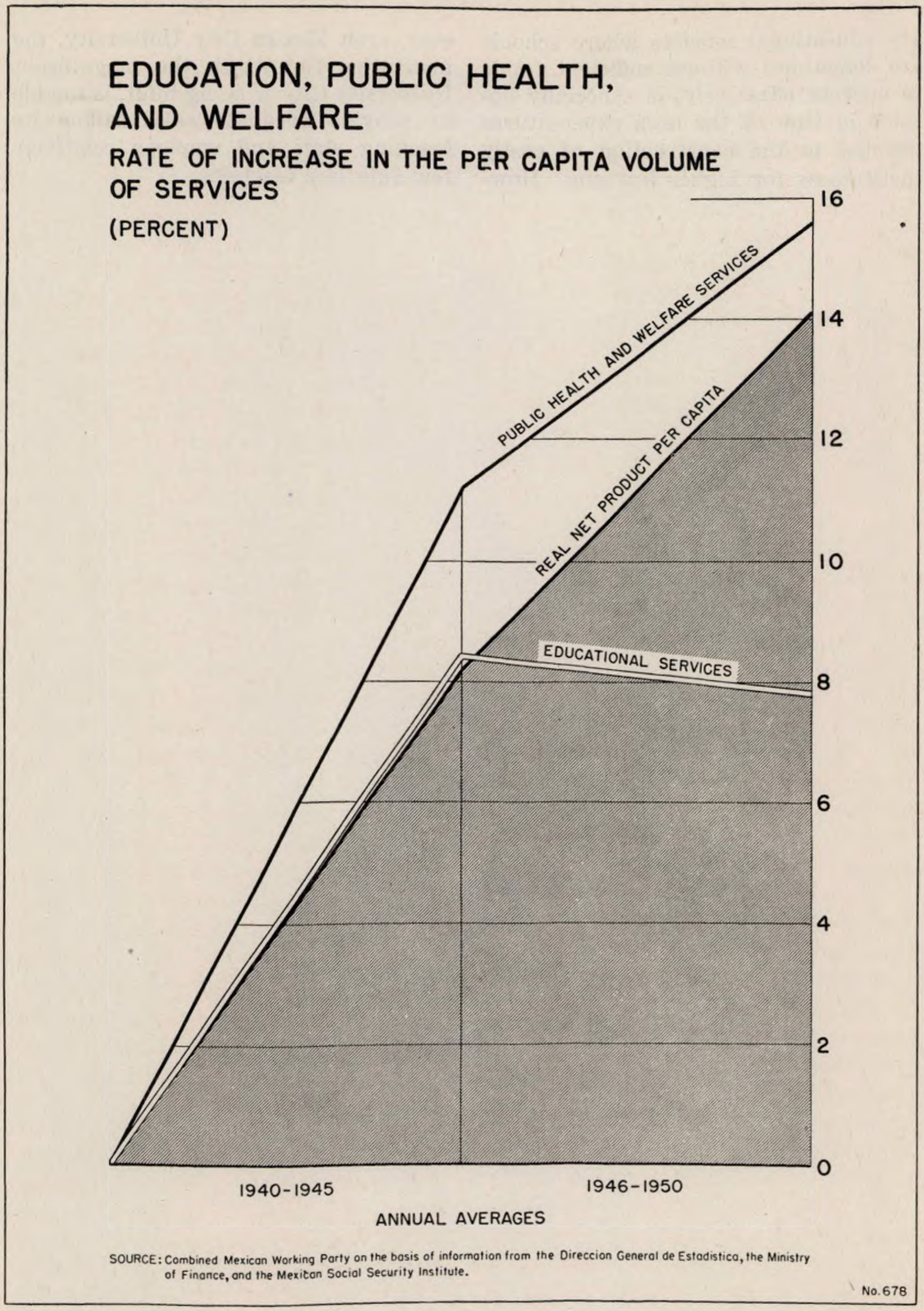
B. Volume of Services

The volume of educational, health and welfare services has increased substantially between 1939 and 1950. Since the end of the war, however, the rate of growth of these services has declined greatly while government investment for economic development was increasing at an accelerating rate. The slackening has been especially noticeable in the field of education, in which the increase in the volume of services since 1946 has not matched the rise in either real domestic product or population.

According to estimates made by the Combined Mexican Working Party the volume of public health and welfare services increased from 1940 to 1945 at an annual average rate of 14%. This rate of increase was much higher than the rate of increase in real domestic product of 8% a year in the same period. On the other hand, between 1946 and 1950 the rate of increase fell to an average of 7.5% per annum (Table 112 and Chart 16). This rate of increase was still higher than the annual rate of increase in real product of 6%. However, the advances since 1946 would not have been possible without the services supplied by the Social Security Institute beginning in 1944, since the volume of other health and welfare services actually declined.

The volume of educational services increased from 1940 to 1945 at an average annual rate of 11%; between 1946 and 1950 the rate fell to only 2%, which implies an average annual per capita decline of 0.6% (Table 112 and Chart 16). Although the number of technical schools has been increasing, more technical training facilities are required to meet the growing needs of the economy. The inadequacy of primary and second-

CHART 16



EDUCATION, PUBLIC HEALTH, AND WELFARE

RATE OF INCREASE IN THE PER CAPITA VOLUME OF SERVICES

(PERCENT)

SOURCE: Combined Mexican Working Party on the basis of information from the Direccion General de Estadistica, the Ministry of Finance, and the Mexican Social Security Institute.

ary educational services where schools are sometimes without sufficient funds to operate effectively, is especially notable in view of the high expenditures devoted to the construction of costly institutions for higher learning. However, even Mexico City University, the institution for which the magnificent University City is being built, is unable to provide adequate salaries for its teaching staff and employs relatively few full-time teachers.

CHAPTER IX

Public Finance

A. PUBLIC EXPENDITURES

In 1939-1950 public investment expenditures increased greatly both in real terms and in relation to national product. On the other hand, real current public expenditures barely increased as much as population, and declined in relation to national income.

Real investment expenditures (excluding investments by official enterprises financed from earnings) in 1950 were four and one-half times greater than in 1939. In the same period the ratio of public investment expenditures to total public expenditures increased from 19 to 41% (Table 116) and their ratio to gross national product more than doubled. In 1950 real current expenditures (mainly for public administration, education and social services, defense and interest payments on the public debt) were almost 50% higher than in 1939, but little more than 10% higher on a per capita basis; in relation to gross national product, current expenditures declined steadily to only half of the 1939 ratio in 1946, but the ratio rose again from 1946 to 1950. Together public investment and current expenditures increased from 750 million pesos in 1939 to 4,780 million pesos in 1950. However, in relation to national product, expenditures declined from 12% in 1940 to 9% in 1946. Although the ratio has increased since then, it has never exceeded the 1939 level (Tables 116 and 117, Chart 17).

Mexico's expenditures for defense, debt service, or administration are not great. Nevertheless, the great increase in public investment has made it necessary to slow down the rate of increase of current public expenditures. The falling ratio of such expenditures to national product between 1939-1950 has been partly due to small outlays for educational and social services and to low civil salaries.

Before 1949 budgetary planning, administration and control were poor. In some years, more than 10% of total federal expenditures were made outside the budget; moreover, in every year between 1939 and 1949 expenditures exceeded the budget. Since 1949 administration and control of the federal budget and of the expenditures of autonomous government agencies have improved. Further changes are needed, however. As expenditures by autonomous official agencies have expanded, it has become increasingly important that their budgets be harmonized with the federal budget and that adequate controls be established over all public expenditures. A better classification of expenditures and receipts according to their nature and function is needed which, in addition to serving administrative ends, would permit evaluation of the effects of fiscal policy on economic development.

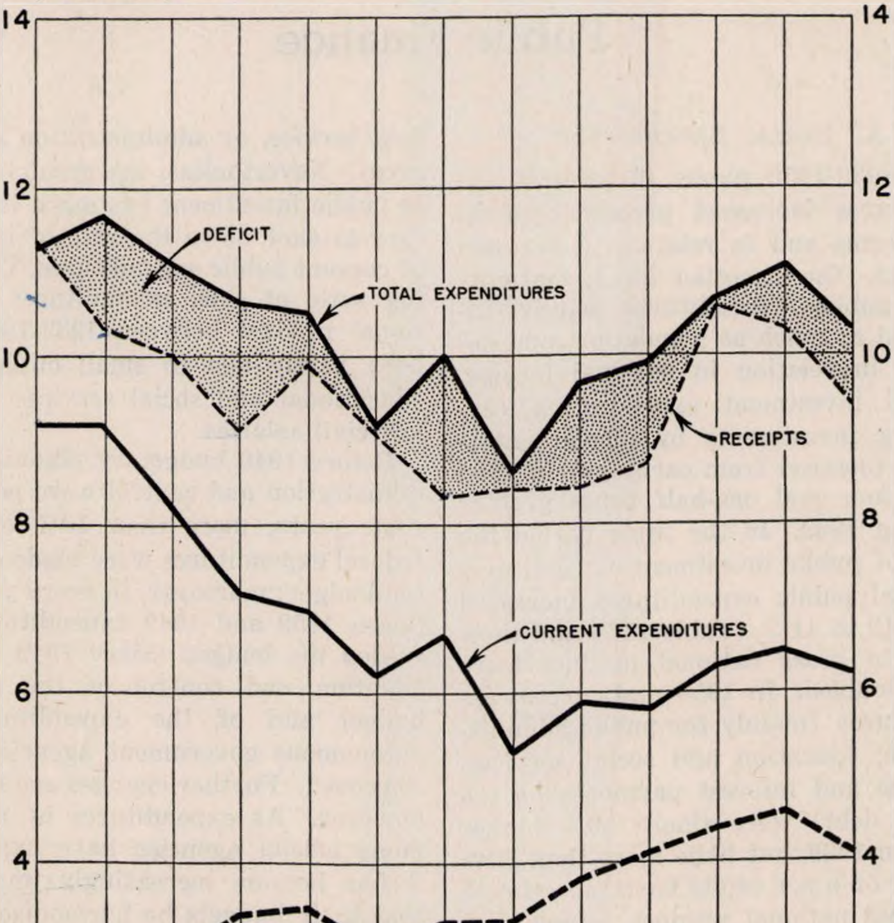
B. PUBLIC RECEIPTS

The importance of income and other direct taxes increased considerably

CHART 17

PUBLIC EXPENDITURES AND RECEIPTS IN RELATION TO GROSS NATIONAL PRODUCT

(PERCENT)



SOURCE: Combined Mexican Working Party.

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while that of indirect taxes declined between 1939 and 1950. In spite of this, and although tax administration improved, public revenues were lower in relation to national product in 1950 than in 1939, and a smaller part of profits was absorbed by taxes.

Combined fiscal receipts of the Federal Government, local governments and other public authorities (excluding public enterprises) rose from 760 million pesos in 1939 to 4,440 million pesos in 1950, and by about 90% in real terms. On the other hand, receipts fell from 11.4% of gross national product in 1939 to 8.4% in 1947; in spite of increased export taxes following the devaluation, this ratio had recovered to only 10.3% in 1950. In real terms per capita public receipts increased by only 42% from 1939 to 1950, compared with a per capita increase in real product of 62% (Table 117, Chart 17).

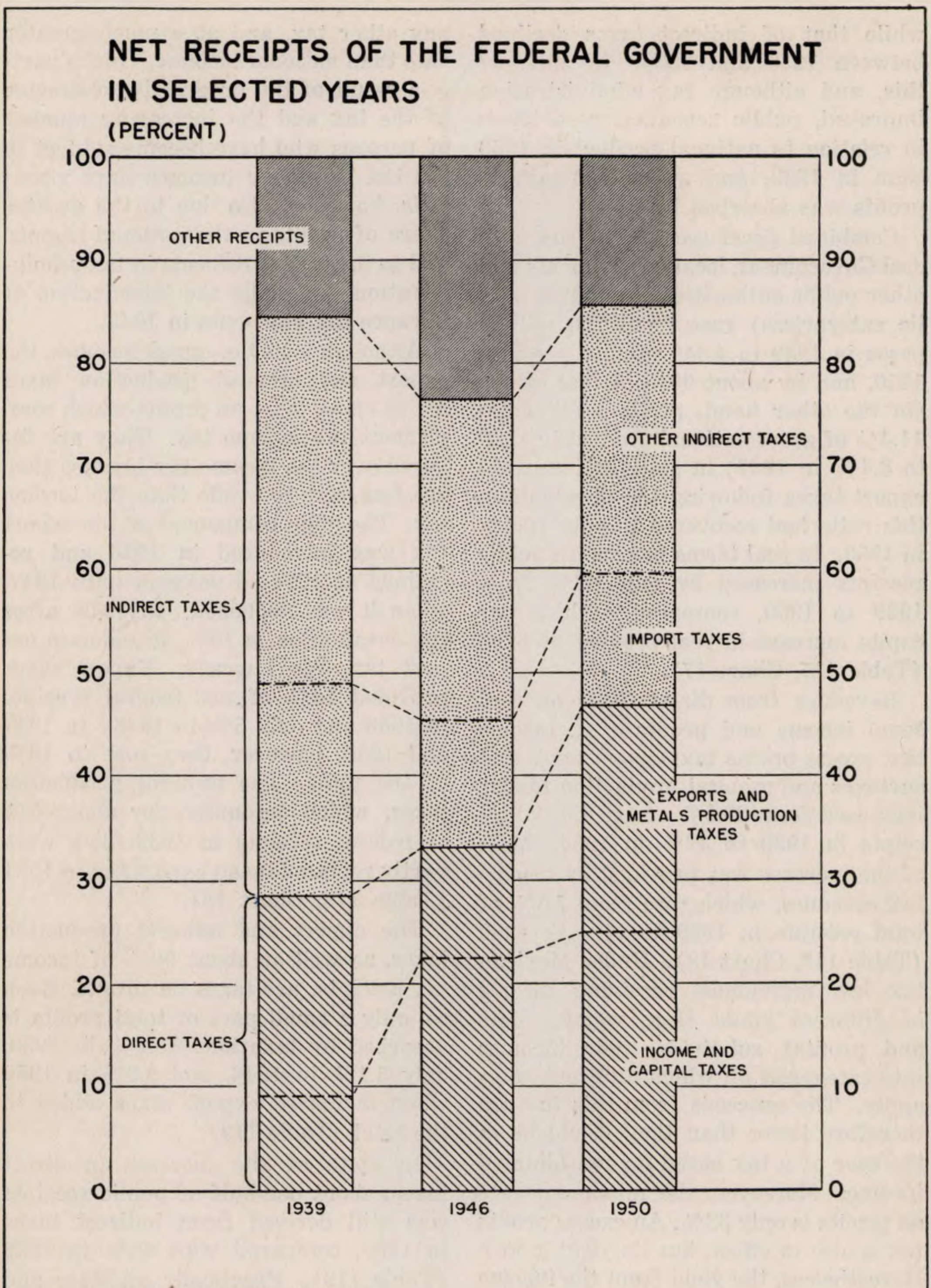
Revenues from direct taxes on personal income and profits (i.e., income tax, excess profits tax, export taxes and surtaxes and mineral production taxes) increased from 28.5% of net federal receipts in 1939 to 47% in 1950. Most of the increase was provided by income tax revenues, which rose from 7.5% of total receipts in 1939 to 24% in 1950 (Table 118, Chart 18). Under Mexican tax law individuals receiving income of different kinds (e.g., wages, rents and profits) subdivide their incomes into categories on which different rates apply. The proceeds from this tax are therefore lower than they would be in the case of a tax based on consolidated income. Moreover, the maximum rate on profits is only 33%. An excess profits tax is also in effect, but its yield is low. Nevertheless, the yield from the income tax has increased more than that of any other tax, and at a much greater rate than national income. This is partly a result of the progressive character of the tax and the increasing number of persons who have become subject to the tax as money incomes have risen; it is, however, also due to the greater share of profits in the national income, and to important reforms in tax administration, especially the introduction of advance tax payments in 1943.

Although levied on gross incomes, the export and mineral production taxes are in effect taxes on profits which complement the income tax. They are favored over the income tax because they are less easy to evade than the income tax. The main component of the export tax was introduced in 1938 and remained at 12% ad valorem until 1947, when it was abolished. In 1948, after the devaluation, a 15% ad valorem export tax was imposed. Export taxes provided 14% of net federal receipts in 1939 and only 5% in 1948. In 1949 and 1950, however, they rose to 16% of the total. The mineral production taxes, which accounted for about 5% of federal receipts in 1939-1950, were partly replaced by an export tax in 1951 (Table 118, Chart 18).

The export and mineral production taxes, as well as about 90% of income tax receipts, are taxes on profits. Even so, only a small part of total profits is absorbed by taxation: 10.2% in 1939, only 5.1% in 1946, and 9.9% in 1950 when increased export taxes added to the total (Table 119).

In spite of the increase in direct taxes, about one-half of public receipts was still derived from indirect taxes in 1950, compared with 68% in 1939 (Table 119). Practically all state and municipal taxes are indirect, and 39%

CHART 18



SOURCE: Ministry of Finance and Public Credit.

of the receipts of the Federal Government came from this source in 1950, compared with 56% in 1939 (Table 118, Chart 18). However, proceeds from indirect taxes have increased at a much slower rate than national product since 1939; and they have declined from 9.7% of private consumption expenditures in 1939 to 6.5% in 1950 (Table 119).

The shift towards direct taxation and the improvement in administration of both direct and indirect taxes have been almost entirely limited to the Federal Government. The state and municipal fiscal systems remain antiquated and inflexible; only in the Federal District and in 5 or 6 of the states have some reforms been adopted in recent years. Local government receipts have also increased far less than those of the Federal Government; in 1950 they were only 2.1% of gross national product compared with 3.1% in 1939 (Table 119). The slow increase in local revenues has seriously hampered investment in feeder roads, maintenance of state highways and construction of communal facilities.

C. Deficit of the Public Sector

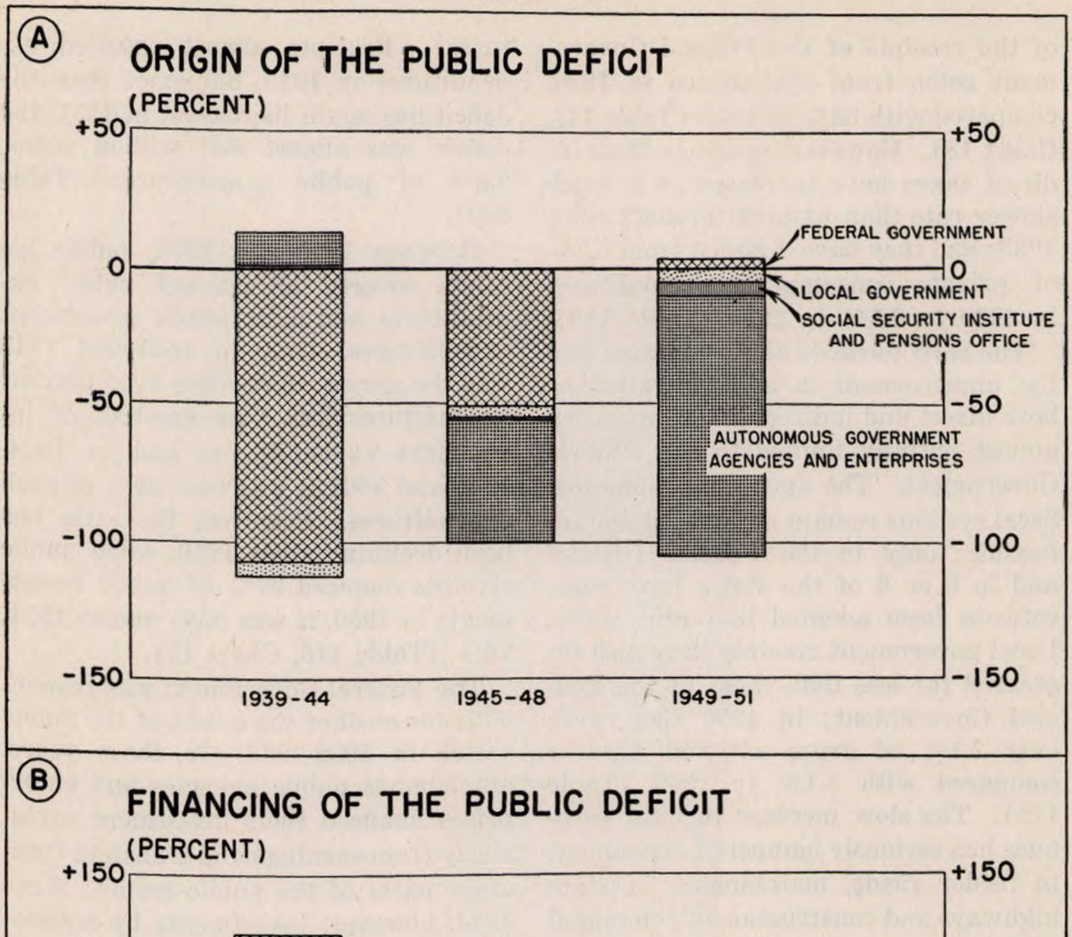
Total public expenditures have been higher than public receipts in every year from 1940 to 1951. Until 1945, the deficits were mainly financed by credits from the Bank of Mexico; since then the deficits have been financed increasingly by domestic credits from sources other than the Bank of Mexico, and by foreign loans and grants which reduced the inflationary effect of the deficit.

Compared with public expenditures the greatest deficits were incurred in the early war years 1940-1942 (12.3% of expenditures) and in the postwar years 1945-1948 (11.5% of expenditures). Receipts almost equalled expenditures in 1949, but since then the deficit has again increased; in 1951, the deficit was almost 600 million pesos, 9.6% of public expenditures (Table 120).

Between 1940 and 1951, public receipts covered all current public expenditures and most public investment expenditures. Only in 1940 and 1945 was the excess of receipts over current expenditures less than one-half of investment expenditures; and in 1944, 1946 and 1949 it was over 90% of such expenditures. However, the ratio has been declining since 1949, when public receipts financed 97% of public investment; in 1950, it was 83% and in 1951, 76% (Table 116, Chart 17).

The Federal Government was responsible for most of the deficit of the public sector in 1939-1944. In those years, autonomous public agencies and enterprises financed their investment exclusively from earnings and transfers from other parts of the public sector. Since 1944, however, investments by autonomous agencies have increased much more than those of the Federal Government, and more than their own earnings and receipts from other parts of the public sector. Moreover, the Federal Government had surpluses in 1949 and 1950 as a result of increased revenues following devaluation. In consequence, the autonomous agencies and enterprises accounted for nearly half the deficit of the public sector in 1945-1948 and nearly all of it in 1949-1951. Local governments have had a small deficit throughout the 1939-1951 period, and so have the Social Security Institute and the Office for Civil and Retirement Pensions since 1947 (Table 120, Chart 19A).

CHART 19



Ⓐ ORIGIN OF THE PUBLIC DEFICIT (PERCENT)

Ⓑ FINANCING OF THE PUBLIC DEFICIT (PERCENT)

SOURCE: Combined Mexican Working Party.

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PUBLIC DEFICIT (—) OR SURPLUS (+)
(Millions of pesos)

	1939-1944	1945-1948	1949-1951
Total Public Deficit	−432	−1,211	−950
Federal Government	−464	−617	+ 34
Local Governments	− 23	− 46	− 39
Social Security Institute & Office for Civil & Retirement Pensions	+ 51	− 6	− 47
Autonomous Government agencies and enterprises	+ 4	−542	−898

While the origin of the deficit was changing, foreign loans and grants were becoming increasingly important in financing the deficit. In 1939-1944, the entire deficit of the public sector was financed by domestic credit, and moreover, foreign obligations were reduced, mainly by indemnity payments for nationalized properties.

On the other hand, in 1945-1948 new external loans, principally from the Export-Import Bank, equalled indemnities and amortization of foreign debt and, in addition, financed nearly 20% of the public sector deficit. In 1949-1951 grants from the U.S. Government for the eradication of foot-and-mouth disease, together with loans from the Export-Import Bank and the International Bank for Reconstruction and Development, raised the share of foreign financing of the deficit to over 50%.

Domestic financing of the deficit also has changed. Until 1945 domestic funds for meeting the deficit were obtained through the issue of Federal bonds and Treasury certificates which usually found their way to the Bank of Mexico. This continued in 1945-1948, but at the same time other bank credit to autonomous public agencies and enterprises was increasing. In 1949-1951 the Federal Government greatly reduced its floating debt to the Bank of Mexico and internal financing of the deficit was limited to loans by autonomous agencies, and to private grants for public investment (Table 121, Chart 19B). Both the loans and the grants were mostly financed by private banks.

FINANCING THE PUBLIC DEFICIT
(Millions of pesos)

	1939-1944	1945-1948	1949-1951
Total Financing	**432**	**1,211**	**950**
Internal	*551*	*987*	*462*
Federal Government funded debt	518	697	152
Federal Government floating debt	300	85	—339
Other credit and changes in cash holdings	—267	203	373
Private grants	—	2	276
External	*—119*	*224*	*488*
Funded debt	32	310	339
Floating debt	— 13	11	33
Payments of indemnities	—188	—172	—260
Grants and other	50	75	376
Private investment		8	

The change from internal to external sources of financing has reduced the inflationary effects of the public deficit. Foreign financing as such is not inflationary, although indirectly, by increasing local expenditures for development projects which would not have been made without foreign funds, it may have some inflationary effects if local expenditures are financed by credit expansion. In any case, it is doubtful whether the shift in domestic financing from the Bank of Mexico to other banks and the public has reduced the inflationary impact of the deficit.

D. THE OUTLOOK

Public finance has played an important part in Mexico's economic development. During the 1939-1950 period, nearly 40% of public expenditures was invested and public investment in that period was almost 40% of total investment in Mexico. Public investment was mostly covered by public receipts. Nevertheless, a deficit was created which was mainly financed, directly and indirectly, through the Bank of Mexico, with expansionary effects on incomes and prices.

There can be no doubt that the investments for which the deficits were incurred helped to raise real income. Deficit financing, however, also contributed to great increases in profits compared with wages and other incomes and impaired the balance of payments. Eventually imports had to be restricted and the peso devalued. Simultaneously, public revenues were declining in relation to national income, and direct taxes in relation to profits.

Since 1949 important changes have taken place in public finance. Direct taxes have increased greatly and the public deficit has thereby been reduced. The inflationary effects of the deficit were also lower because a large part of the public deficit was financed by foreign loans and grants. Nevertheless, in 1950 public receipts compared with the national income were still lower than in 1939 and direct taxes absorbed less than 10% of total profits, a smaller proportion than in 1939. In 1949, revenues had increased greatly as a result of the new export surtax of 15%. The yield of the export tax, once imposed, could not go on increasing as rapidly as in 1949. Since investment continued to expand, however, the public deficit was again increased.

The claims on public investment funds will be greater in the next decade than ever before. Large investments are needed in transportation and communications, electric power, public municipal works, irrigation, soil conservation and reforestation and the development of petroleum resources. Most of these investments will be undertaken by the Government and its agencies. In addition, greater expenditures will be required for educational, social and administrative services.

The possibilities for meeting these needs without recourse to inflationary methods of financing are greater than ever before. Real income has never been higher and profits are still close to the high proportion of national income they attained during the war. These conditions provide an outstanding opportunity to increase public receipts by taxation to meet the requirements of public investment in the next decade and to improve the distribution of incomes.

CHAPTER X

Balance of Payments

A. RECENT HISTORY

1. *Structure of the Balance of Payments*

The Mexican balance of payments in the last decade has been shaped almost entirely by two sets of factors: the levels of income, consumption, supply and prices in the United States, and Mexico's drive toward economic development. U. S. income, consumption, and prices have determined the volume and value of Mexican exports (as well as of other current receipts), while supplies of goods and prices in the U. S. have governed the volume of Mexican imports. On the other hand, economic development in Mexico by increasing the need for imports, has meant pressure on foreign reserves except when scarcity in the U. S. has made it difficult to obtain goods. The demands of economic development have also raised domestic demand for some commodities at a more rapid rate than output has expanded (e.g., the consumption of petroleum products rose 161% between 1939 and 1950 while production increased by only 69%), thereby reducing the quantity of goods available for export.

a. Financing Imports. Between 1939 and 1943, the scarcity of import goods and high foreign demand for Mexican exports combined to keep exports higher than imports except in 1941 when the imminence of the U. S. entry into World War II induced a temporary spurt of anticipatory buying. After 1943, goods became increasingly available and imports rose above exports. The higher imports were financed by accumulated foreign reserves, by important receipts from tourism and by substantial capital inflows, which made it possible for imports to exceed exports in every year between 1944 and 1950 (Table 122).

The almost uninterrupted rise in net tourist receipts from $22 million in 1939 to $156 million in 1950 brought Mexico a total of $790 million in that period and almost closed the gap of $900 million between imports and exports (Table 123 and Chart 19). In 1939, tourism contributed 16% of current receipts in the balance of payments; it provided 23% of the total in 1950, which is perhaps as high a proportion as in any country of the world. Although on a much smaller scale, remittances from Mexican agricultural workers in the United States also added to receipts, particularly during the war years.

Uncertainties surrounding Mexican foreign trade estimates have made an unknown contribution to the net errors and omissions in the balance of payments. Nevertheless, the magnitude of the errors and omissions item in some years suggests that capital movements also are recorded incompletely. On the basis of the existing data, however, Mexico was a net importer of capital in the twelve years from 1939 to 1950 to the extent of $212 million, not including U. S. grants of $88 million made between 1946 and 1950 mostly in connection with the foot-and-mouth disease eradication program (Table 123).

The net inflow of long-term capital of $243 million ($240 million in private and $3 million in official capital) was partly offset by a net outward movement of $31 million in short-term capital. Of the $240 million in private long-term capital imports, foreign direct investments during the period netted $80 million and intercompany accounts $44 million, but reinvested profits were much more important, accounting for $116 million. Most of the net deficit in short-term capital movements ($26 million out of a net outflow of $31 million) in the 1939-1950 period was accounted for by governmental payments abroad, for although gross exports of private short-term capital amounted to $114 million, a compensatory inward movement of $110 million left a negative balance of only $4 million for the entire period (Table 123).

b. Sources of Foreign Exchange. Notwithstanding considerable receipts from tourism and capital inflows, it became necessary temporarily to call upon the International Monetary Fund in 1947 for $22.5 million and on the U. S. Stabilization Fund in 1947 and 1948 for a total of $37 million. In spite of intervals of exchange stringency in 1947 and 1948, however, net foreign exchange reserves and short-term holdings abroad increased by $249 million between 1939 and 1950, excluding $23 million obtained from the International Monetary Fund (Table 123 and Chart 20).

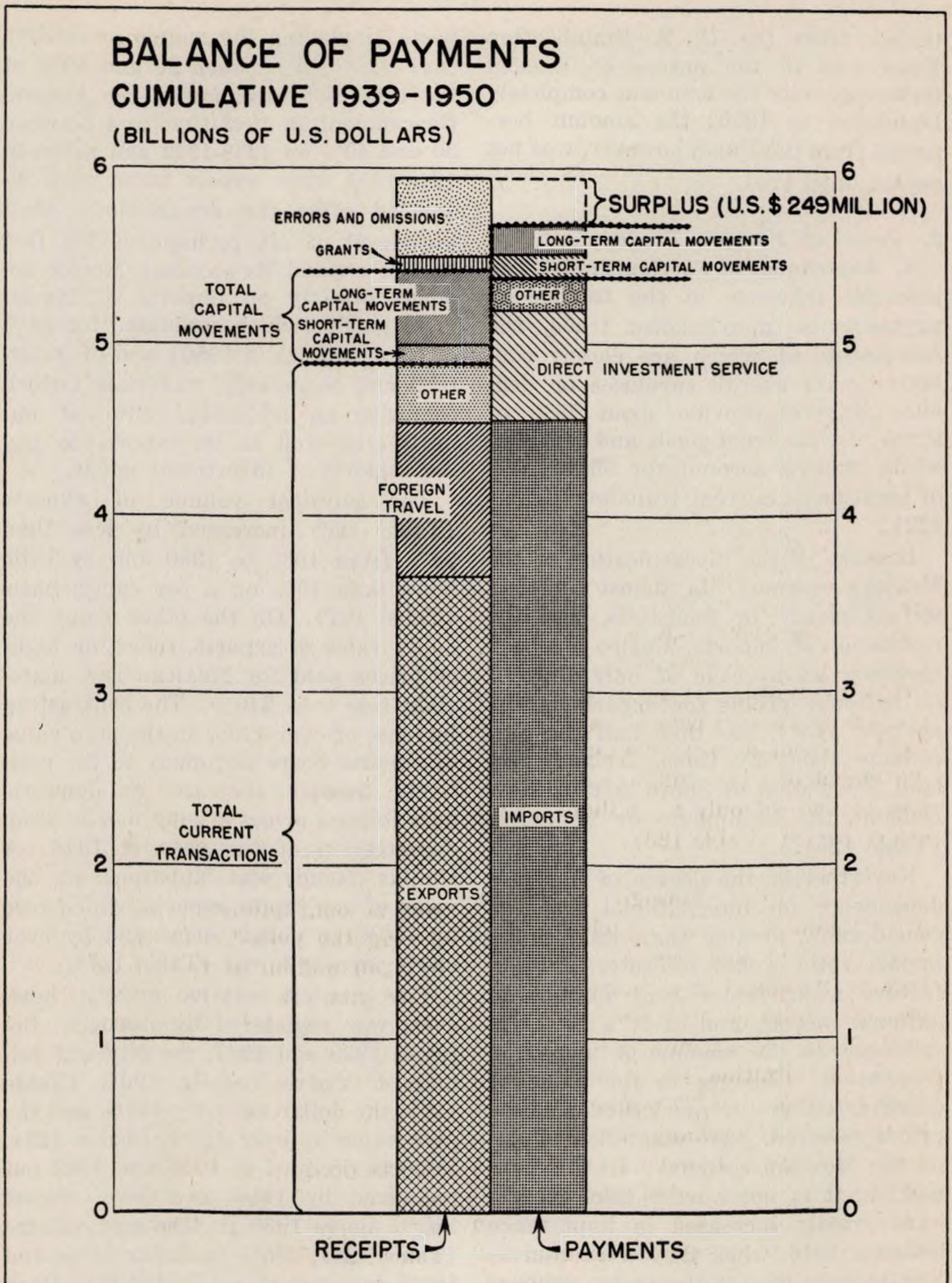
Cumulative Uses and Sources of
Foreign Reserves
1939–1950
(Millions of Dollars)

Uses of Foreign Reserves	
1. Current accounts deficit	$487
2. Net outflow of short-term capital	31
3. Amortization of government debt	163
4. Increase in foreign reserves	247
5. Increase in short-term holdings abroad	25
Total	*953*
Sources of Foreign Reserves	
1. Private foreign investment	$240
2. Loans disbursed	166
3. Grants	88
4. International Monetary Fund	23
5. Errors and omissions	436
Total	*953*

Source: Tables 122, 123 and 124.

The most important single factor accounting for increased reserves and holdings abroad in the face of the substantial deficit in the cumulative current account and other payments made during the period, was the net inflow of $240 million of foreign private investments. Actual receipts from this source must have been greater, for the errors and omissions item of $436 million undoubtedly includes an unascertained quantity of foreign, private long-term capital inflows. However, official transactions provided a considerable amount of foreign exchange. Government borrowing of $166 million offset amortization on official loans of $163 million, while receipts from intergovernmental grants provided an additional $88 million. The $37 million ob-

CHART 20



SOURCE: Bank of Mexico, Departamento de Estudios Económicos, and International Monetary Fund.

tained from the U. S. Stabilization Fund was in the nature of interim financing, since the loan was completely liquidated in 1950; the amount borrowed from the Fund, however, was not repaid until 1951.

2. *Trend of Foreign Trade*

a. Importance of Foreign Trade. The principal influence in the balance of payments is merchandise trade, the movements of which are closely connected with overall surpluses or deficits. Exports provide about 75% of gross receipts from goods and services; while imports account for 85 to 90% of identifiable current transfers (Table 122).

Because of the diversification of the Mexican economy, its almost complete self-sufficiency in foodstuffs, and the restriction of imports, Mexico has been spending an average of only 13% of its national income for imports in the postwar years, less than half the percentage spent by Cuba, Iceland, Ireland, the Union of South Africa, New Zealand, the Philippines or Venezuela (Table 125).

Nevertheless, the degree of Mexico's dependence on international trade is considerably greater than its average import ratio would indicate. Foreign factors make major contributions to national income, and exert a powerful influence on the amount of money in circulation. Changes in the value of exports, either in quantities sold or prices received, have magnified effects on the Mexican economy. In this connection, it is noteworthy that exports have greatly increased in importance between 1946, when they were equivalent to only 6% of the gross national product, and 1950, when they were 11%. Moreover, taxes on imports and exports (including the metals production tax) provided between 20 and 30% of the total net revenues of the Federal Government in 1943-1948 and between 30 and 40% in 1939-1942 and again in 1949-1951 when export taxes were increased after the devaluation. Most important of all, perhaps, is the fact that to expand its economy Mexico depends directly on imports of investment goods (which accounted for 38% of total imports in 1950) and of industrial and commercial materials (which comprise an additional 30% of imports), as well as on exports to pay for imports of investment goods.

The physical volume of exports (Table 126) increased by less than 50% from 1939 to 1950 and by little more than 10% on a per capita basis (Table 127). On the other hand, the dollar value of exports, reflecting higher prices paid for Mexican raw materials, rose over 240%. The contrasting increase of over 470% in the peso value of exports bears testimony to the relatively greater increase in domestic over foreign prices arising mostly from depreciation of the peso in 1948. A similar trend was apparent in the value of per capita exports, which rose by 160% in dollar terms and by over 330% in peso terms (Table 127).

The greatest relative growth, however, was registered by imports. Between 1939 and 1947, the physical volume of imports rose by 190% (Table 126), the dollar value by 460% and the peso value by over 425% (Table 128). Imports declined in 1948 and 1949 but recovered by 1950 to a level almost 140% above 1939 in terms of volume (Table 126), 365% in dollar value and 680% in peso value (Table 128). On a per capita basis, between 1939 and 1950 imports nearly doubled in volume, increased more than three and one-half times in terms of dollars and almost sixfold in terms of pesos (Table 129).

b. Exports. In spite of considerable industrialization, Mexico remains predominantly an exporter of agricultural products and minerals and an importer of manufactured goods. On the basis of customs statistics, the ratio of primary materials (i.e., agricultural plus mineral exports) to total exports has declined only moderately from about 94% to 88% between 1939 and 1950, while simultaneously the ratio of exports of manufactures (some of which undergo only a limited amount of processing prior to export) to the total increased somewhat from 6% to 10% (Table 130).

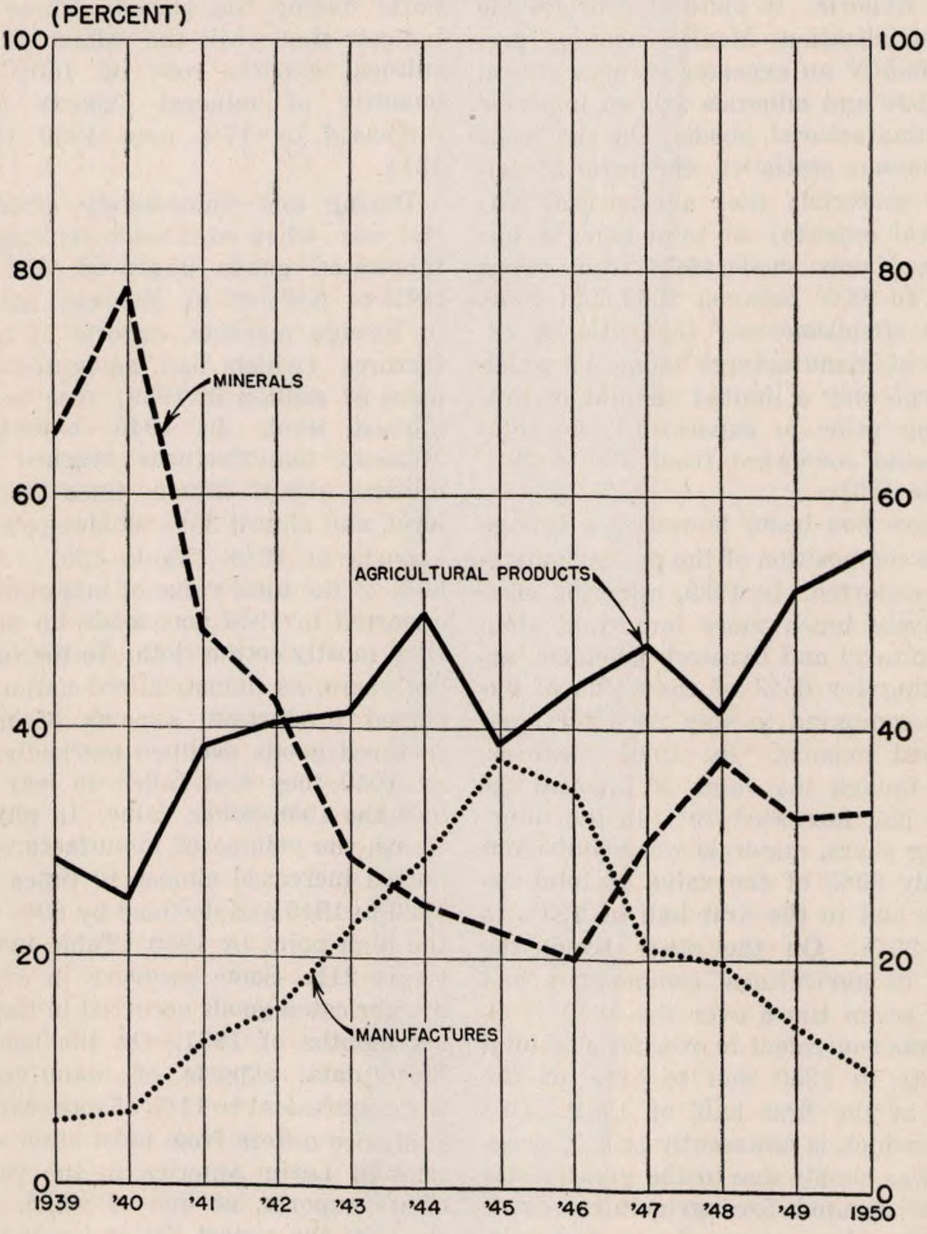
There has been, however, a change in the composition of the primary materials exported. In 1939, minerals were relatively much more important than agricultural and livestock products, accounting for 65% of the value of exports compared to only 28% for agricultural exports. By 1950, however, even though the value of mineral exports had increased 79% in the intervening years, minerals were equivalent to only 33% of the value of total exports, and in the first half of 1951, to only 30%. On the other hand, the value of agricultural commodities had risen seven times over the 1939 level, and was equivalent to over 55% of total exports in 1950 and to 58% of the total in the first half of 1951. This shift, which is apparently still in progress was chiefly due to the greater rise in the demand for agricultural products abroad as compared with minerals. Mexico was able to increase agricultural production to meet this demand and increase the volume as well as the value of its agricultural exports. This is confirmed by available, although not strictly comparable, indices of the volume of mineral and agricultural exports during the period. These data indicate that while the volume of agricultural exports rose by 150%, the quantity of mineral exports barely increased by 17% over 1939 (Table 131).

During and immediately after the last war, when worldwide shortages of fabricated goods improved the competitive position of Mexican industry in foreign markets, exports of manufactures (which had amounted to a mere $7 million in 1939) rose to their highest level. In 1946, exports of Mexican manufactures reached $103 million, almost fifteen times the 1939 level, and almost 35% of Mexico's total exports in 1946 (Table 130). About 60% of the total value of manufactures exported in 1946 was made up of textiles, mostly cotton cloth. In the following years, as industrialized nations resumed production, exports of manufactured goods declined markedly, and by 1950 they had fallen to less than half the 1946 dollar value. In physical terms, the volume of manufactures exported increased almost 10 times from 1939 to 1945 and declined by 60% from the high point by 1950 (Table 131 and Chart 21). Some recovery in exports of fabricated goods occurred in the first six months of 1951. On the basis of these data, exports of manufactures were equivalent to 11% of total exports.

Mexico differs from most other countries of Latin America in the variety of its exports, no one of which overshadows the export list or heads it for long. This is true in spite of the fact that four commodities, cotton, coffee, lead and silver, together accounted for

CHART 21

VALUE OF EXPORTS OF AGRICULTURAL PRODUCTS, MINERALS AND MANUFACTURES AS PERCENTAGES OF TOTAL EXPORTS



SOURCE: Based on a regrouping of the Bank of Mexico's (Departamento de Estudios Economicos) classification of uncorrected customs data of the Dirección General de Estadística.

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over 54% of Mexico's exports in 1950. Between 1943 and 1947, it took from seven to ten commodities to exceed 50% of exports, but the unprecedented advance in coffee and cotton prices reduced the number to four in 1950 (Table 132).

Cotton was the chief export in 1949 and 1950, but before then gold, silver, textiles and lead had each held first place in at least one year between 1939 and 1948. Stimulated by the cotton policy of the United States, depreciation of the peso, and the increase in irrigated lands, production of cotton rose strikingly in the postwar period. In 1950 the volume of production was 110% higher than in 1948 and 275% above 1939. Mexico now ranks as fourth among the cotton exporting countries of the world, only the United States, Egypt and Pakistan having exported more cotton in the 1950-51 crop year. In 1950, according to revised estimates, exports of raw cotton reached $139 million (more than twice the value of cotton exported in 1949) and 26% of total exports, a ratio without precedent in the period 1939-1950 (Tables 133 and 134). If cotton lint exports are added, the amount was $143 million, the proportion to total exports close to 27%. Between 1939 and 1949, the physical volume of cotton exports increased over thirteen and one-half times. The increase in 1950 over the previous year, however, amounted to only 33%, most of the rise in the value of cotton exports being due to the increase in cotton prices.

The export value of henequen, the major hard fiber grown in Mexico, although showing a long-term trend downward, has been rising in recent years because of increases in prices, although less spectacularly and on a lower level than cotton. In 1950, exports amounted to $17 million, compared with $9 million in 1945. In contrast, exports of soft fiber textile manufactures (which, profiting by war-induced shortages, had risen to a high of $55 million in 1946), and henequen and ixtle lechuguilla manufactures (which had reached a peak of $15 million in 1947), have been declining in recent years. In 1950, exports of soft fiber textiles amounted to only $12 million, and henequen and ixtle manufactures to $7 million.

Next to cotton, coffee is increasingly the most important agricultural export. Coffee exports expanded from $13 million in 1946, when they were equivalent to 4% of the total value of exports, to $45 million and over 8% of exports in 1950. In 1950, when Mexico sent the United States 45,000 metric tons of coffee as compared to only 33,000 tons in 1946, it replaced Guatemala as the third most important supplier of coffee to the United States. The value of exports of feed and candelilla wax also have risen in recent years, but most other exports of agricultural commodities have declined. Among these, all of which are much below cotton or coffee in importance, are rice, chickpeas, vanilla, peppers, sugar, oilseeds and vegetable oils, bananas, chicle and ixtle lechuguilla fiber. The export value of tomatoes also has declined because of reduced demand in the United States. The reduction in banana exports was due solely to the sigatoka disease.

Exports of shellfish have been rising rapidly, amounting to $19 million in 1950 as compared with only $0.7 million in 1939. Most of the increase is attributable to the rise in shrimp exports. On the other hand, after a phenomenal growth, a marked decline in exports of fresh, refrigerated, processed and canned meats occurred in 1950, when the ECA stopped buying meat for shipment to Greece.

Lead is the most valuable mineral export and the second most important of all Mexican export commodities, accounting for about $70 million and over 13% of all exports in 1950. The value of zinc exports rose almost steadily between 1939 and 1949, reaching a high point of $34 million in 1949. In 1950, however, they declined to $25 million. As a consequence of increased production from a new plant and higher prices, copper exports increased from $12 million in 1945 to $25 million in 1950. Mexico also exports a wide variety of other industrial minerals, including cadmium, tungsten, tin, arsenic, iron, antimony, molybdenum, graphite, manganese, bismuth, mercury and others, all of which, however, added up to less than $10 million and accounted for less than 2% of total exports in 1950.

In 1939, nonmonetary gold and silver exports each accounted for about 22% of total exports with over $33 million each. Their relative importance as export commodities has fallen since then as a result of reduced production following depletion of reserves and unfavorable price developments. This is particularly true in the case of exports of nonmonetary gold, which have also declined in absolute value, amounting to only $12 million in 1950; exports of silver, however, have increased somewhat in the last few years as a consequence of improved prices and were valued at $37 million in 1950. Largely because of this increase, the physical volume of gold and silver exports, which had fallen to 16% of the 1939 figure in 1944, has recovered slowly to about 63% of the 1939 level in 1950 (Table 135). Most of the increased exports came from stocks, since there has been no significant increase in the production of these metals in recent years.

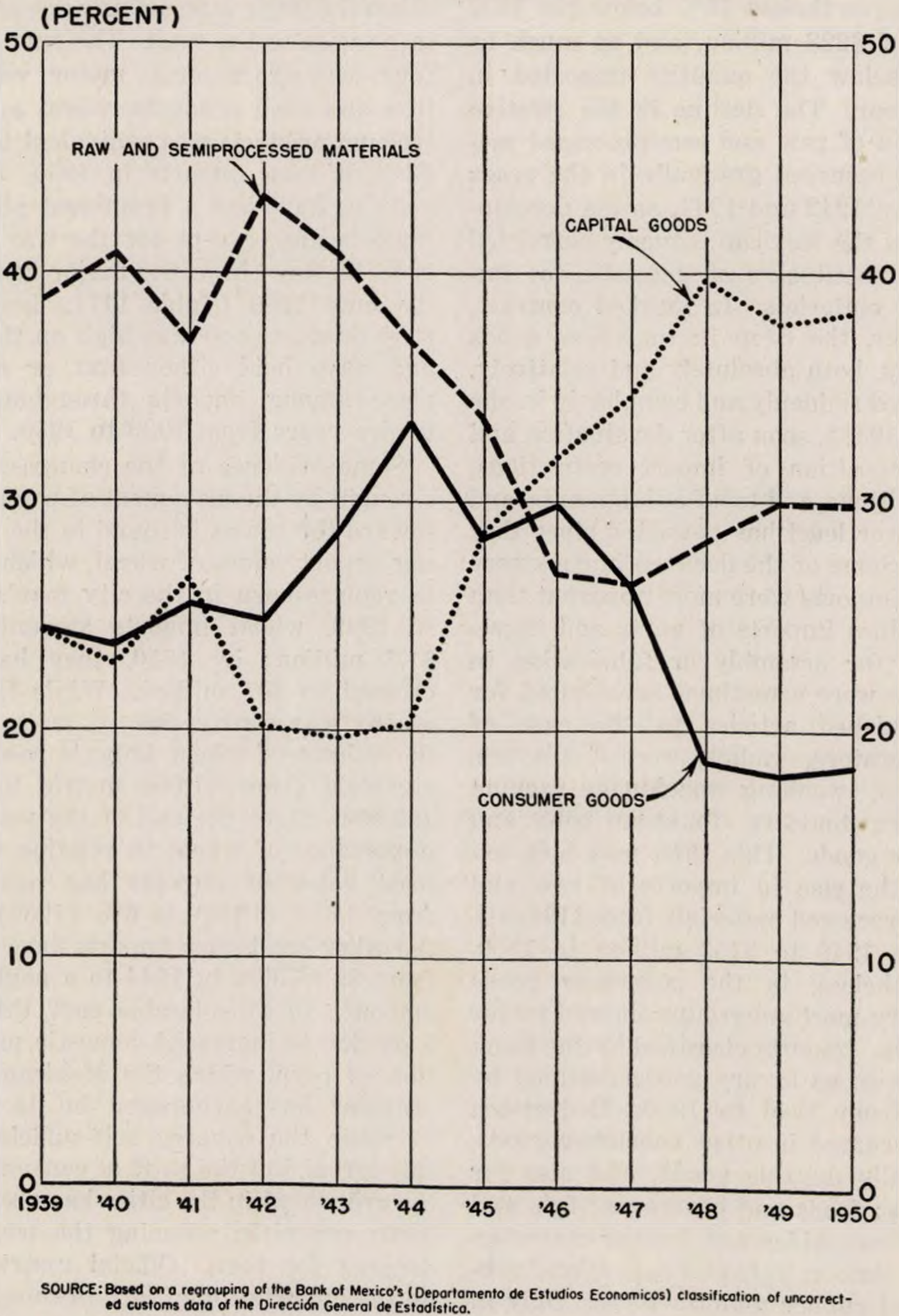
According to official customs statistics, petroleum exports amounted to $32 million in 1950, compared to $16 million in 1939 (Table 133). In terms of physical volume, however, such exports were still only 91% of the 1939 level in 1950 (Table 135). Statistics on exports issued by Petroleos Mexicanos show somewhat higher figures for exports in most years, but they include shipments of crude oil to the United States which are returned as imports after refining (Table 136).

c. **Imports.** The most striking feature of Mexico's imports in recent years has been the growing importance of capital goods and the decline in imports of consumer goods and raw and semiprocessed materials. On the basis of customs statistics, imports of investment goods accounted for 20% of the total value of imports in 1943, consumer goods imports for 29%, and raw and semiprocessed materials for 41%. By 1950, the volume of capital goods imports had risen over 3.6 times, the value by more than 6.5 times, and the importance of the capital goods component to more than 38% of the total value of imports (Tables 137 and 139 and Chart 22). Between 1943 and 1950, however, consumer goods imports, while increasing in value and quantity, declined in relative importance to 18% of the total value of imports. A similar trend was apparent in raw and semiprocessed materials, imports of which increased more than two times in value, but declined in relation to total imports from 41% of total imports in 1943 to 30% in 1950.

Capital goods imports rose steadily

CHART 22

VALUE OF IMPORTS OF CONSUMER GOODS, RAW AND SEMIPROCESSED MATERIALS AND CAPITAL GOODS AS PERCENTAGES OF TOTAL IMPORTS



SOURCE: Based on a regrouping of the Bank of Mexico's (Departamento de Estudios Economicos) classification of uncorrected customs data of the Dirección General de Estadística.

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in value and volume between 1942 and 1947, but declined in 1948 and again in 1949 (Table 139). Although they made a marked recovery in 1950, they were nevertheless 15% below the 1947 level of $228 million, and as much as 23% below the quantity imported in that year. The decline in the relative position of raw and semiprocessed materials occurred gradually in the years between 1942 and 1947, as the development of the Mexican economy permitted some substitution of domestic for imported materials. In marked contrast, however, the drop in consumer goods imports, both absolutely and relatively, occurred suddenly and completely in one year (1948), soon after devaluation and the imposition of import restrictions, prohibitions, and tariff adjustments, and the lower level has persisted since that time. Some of the declines in consumer goods imports were more apparent than real, since imports of parts and ingredients for assembly or fabrication in Mexico were sometimes substituted for the finished articles in the case of refrigerators, radios, record players, watches, washing machines, vacuum cleaners, toasters, fountain pens and similar goods. This shift may help explain the rise in imports of raw and semi-processed materials from $131 million in 1949 to $152 million in 1950. Nevertheless, in the consumer goods category most subgroups showed major declines. Imports classified by the Bank of Mexico as luxury goods declined by 50% from 1946 to 1950. Reductions also occurred in other consumer goods, especially durable goods, and also for textiles; foods and beverages; fats and oils; skins, hides and leather manufactures; timber, pulp and paper; and rubber and rubber manufactures. Only in the case of chemicals and pharmaceutical imports were increases registered in value and quantity (Tables 138, 139 and 140).

The diversity of Mexico's imports reduces the importance of any one of them in relation to the total. The sum of the four leading imports, motor vehicles, iron and steel products, wheat and petroleum products was equivalent to only 23% of total imports in 1950. Motor vehicles have had a prominent place in imports and, except for the war years 1943-45, have been the major commodity since 1939 (Table 141). Iron and steel products are also high on the list, and have held either first or second place among imports throughout the twelve years from 1939 to 1950.

Some evidence of the changes being wrought by the movement of population toward the towns is found in the growing import values of wheat, which tends to replace corn in the city man's diet. In 1939, wheat imports amounted to $1.3 million; by 1950, they had increased to $31 million. While the increase was partly due to price rises, the volume of wheat imports rose over eightfold from 51,000 metric tons to 425,000. Since the end of the war, the importance of wheat in relation to the total value of imports has increased from 3.3% (1946) to 6% (1950). On the other hand, corn imports have fallen from $9 million in 1944 to a negligible amount. In considerable part, this has been due to increased domestic production of corn, which the Mexican Government has encouraged in its effort to make the country self-sufficient in this cereal, but the shift of consumption toward wheat in the cities has also been instrumental in reducing the potential demand for corn. Official restrictions on the importation of lard in connection with attempts to divert consumption to domestic vegetable oils have been responsible for reducing imports of lard from $10 million in 1944 to $3 million in 1950. Although domestic cotton production supplies all internal needs and leaves a sizeable surplus for export, Mexico still relies on imports of rayon and wool. However, the establishment of two rayon plants in Mexico has brought a decline in rayon imports from $9 million in 1948 to $5.5 million in 1950. Wool imports also contracted from the peak level in 1945 ($9 million), but remained sizeable in 1950 ($7 million).

3. *Geographic Distribution of Trade*

a. Role of the United States. Even a cursory examination of Mexico's international transactions reveals that the United States has a major influence on the Mexican balance of payments. The United States is Mexico's principal market and by far its most important source of imports. Moreover, about 90% of Mexico's tourist earnings, all remittances from Mexican workers abroad, and most of the capital coming into Mexico, whether in the form of private investments or official grants or loans, originate in the United States. In the absence of regional balance of payments data, it is not possible to say exactly what the amounts involved may be, but estimates made by the Combined Mexican Working Party indicate that over 84% of Mexico's current and capital receipts in 1950 came from the United States (Table 142).

For the last decade Mexico has depended on the United States for more than four-fifths of its imports, as compared with three-fifths before the war. However, the proportion of such imports to the total declined from 88% to 84% between 1947 and 1950 (Table 143). In dollar terms 1950 imports from the United States ($430 million) were much higher than in 1941 ($159 million), but below the 1947 high point ($583 million).

Mexican exports to the U. S. rose from $63 million in 1939 (when they amounted to 59% of total exports) to $365 million in 1950, but the proportion of such exports to the total declined steadily between 1941 and 1948 from 87.5% to 72.4%. In 1949 and 1950, however, the trend was reversed, and 1950 exports to the U. S. were equivalent to 85.5% of Mexico's total exports (Table 144). A portion of the exports credited to the U. S. in the Mexican customs data is in fact only intransit through the United States to other countries, but there is no doubt that the United States is Mexico's most important customer.

b. Effect of Commercial Policy on Regional Trade. Because Mexico has a ready market for most of its exports in dollar-trading countries (over 92% of its 1950 exports were sold in the Western Hemisphere), Mexico has not ordinarily been under compulsion to exchange its goods for inconvertible currencies or to resort to barter or other bilateral arrangements in order to sell its exports.

There have been occasions, nevertheless, when Mexico was not able to dispose of everything it wanted to sell, either because U. S. demand was not sustained (as in 1949) or because of the accumulation of agricultural surpluses (e.g., chickpeas). In some cases, also, Mexico has desired to obtain prices above those prevailing in the U. S., and at all times, it has sought to develop alternative sources of supply for capital equipment and other industrial goods, especially if they could be obtained without the expenditure of dollars.

The establishment in 1947 of a special body, the Comision de Intercambio Comercial y Creditos Bilaterales, to study the possibilities of promoting trade with exchange-control countries produced no important results. However, Mexico was able to barter exports for Italian rayon. In addition, payments agreements were signed with Czechoslovakia and Spain in 1947, and with France in 1948. Agreements still in force were again concluded with these countries in 1950 and 1951, and another payments agreement was signed with Germany in October 1950.

Although Mexico has been able by these means to dispose of some commodities for which it had no other readily available market, or for prices above those which it could have obtained in hard currency areas, it could take in return only what its European customers were prepared to give, whenever they decided to give it, at prices that Mexico might not have been willing to pay in all instances for similar goods in a free market. Mexico has been able in this way to obtain some shipping, water meters and needed industrial equipment, even if these products were sometimes accompanied by nonessentials like wine. In almost every case, however, Mexico also found it necessary to extend maximum credits to the other parties to the payments agreements as part of the price for selling its commodities or for obtaining industrial goods. As of April 1951, Mexico was a net creditor for $9.9 million under its payments agreement with other countries.

In addition to its payments agreements, Mexico has sought to broaden its commercial relationships by entering into a series of trade and related agreements with other countries. It has concluded commercial treaties now in force with Canada, six Latin American countries and seven European countries (Appendix B) and other trade agreements are being negotiated or planned with Ecuador, Nicaragua, Honduras, Cuba and Norway.

The principal purpose of these treaties is to secure most-favored-nation treatment for Mexican exports, but the treaties also provide at least partial protection against the possibility of discriminatory action (already taken by Cuba) by countries party to the General Agreement on Tariffs and Trade. Although Mexico follows a nondiscriminatory trade policy, it has consistently avoided joining organizations like GATT in order to preserve its freedom to pursue such policies as it feels are necessary to protect its young industries. Similar motives were responsible for the abrogation in December 1950 of the reciprocal trade agreement with the United States (even though it meant higher U. S. duties on many Mexican exports), because the treaty had prevented Mexico from increasing tariffs on a variety of imports from the U. S.

Mexico's trade treaties have probably expanded its exports, especially textiles. Nevertheless, no appreciable reorientation in Mexico's geographical pattern of trade is discernible thus far as a consequence of the trade agreements. Some of the postwar increase in trade with European countries may be attributed to the effect of these agreements, but the proportion of Mexico's European trade to the total is still far below prewar levels.

c. Trade with Europe. In 1939, Mexico's exports to Europe of $39 million were equivalent to 37% of its total sales abroad. During the war (1942), exports declined to a low of $0.2 million and 0.1% of total exports. Thereafter, European purchases from Mexico rose, at first slowly and, after the end of the war, rapidly to a peak of $64 million in 1948, in which year they were equal to 15% of total exports. In 1949 and 1950, however, exports to Europe declined, and in 1950 they amounted to $26 million, only 6.2% of the total.

Mexican imports from Europe between 1939 and 1950 generally conformed to the export pattern, but the numerical and proportional declines during the war and the postwar increases were neither as great or as precipitous as in the case of exports. Mexican imports from Europe decreased from $35 million and 29% of total imports in 1939 to $8 million and 4% of total imports in 1943. Between 1943 and 1947, imports from Europe rose to $51 million. They declined in 1948 and 1949, but stimulated by the devaluation of European currencies in September 1949, increased to $53 million in 1950, or 10% of total imports. Great Britain was Mexico's most important European supplier in 1950 with $12 million in merchandise shipped, but Germany (which supplied Mexico with 13% of its imports in 1939) increased its exports to Mexico markedly from $2 million in 1949 to $7 million in 1950.

d. Trade with Canada and Latin America. There also has been a notable increase in Mexico's trade with Canada. According to official statistics, exports to Canada rose from almost nothing in 1939 to $4 million in 1950 and imports from Canada also increased from $1 million to $12 million during the same period. It is certain, however, that actual trade with Canada is greater than the official data indicate, since Mexican statistics include an unknown amount of commerce with Canada as trade with the U. S.

On the other hand, the importance of Latin America as buyer and supplier has been declining since the end of the war. Mexican exports to Latin America (most of which go to the neighboring countries of Central America), declined from $36 million in 1946 and 12% of total exports to $25 million and 6% of the total in 1950. In the same interval, imports from Latin American countries fell from $42 million to $5 million and in percentage terms from 8% to 1% of total imports.

B. LONG-RUN PROSPECTS

1. *Assumptions*

If an attempt is to be made to forecast Mexico's international economic outlook for some years ahead under existing world conditions, it becomes necessary to rule out certain events which, if they happened, would alter completely the prospects of every country in the western world as well as Mexico. In this category would be included the possibility of another world war or of a major depression in the United States. In Mexico's case, it must be assumed besides that (1) unless and until Mexico can again expand its European trade or increase it elsewhere, the United States will not increase its barriers against Mexican exports and the Western Hemisphere in general, and the United States in particular, will continue to absorb the bulk of Mexico's exports and provide the major share of Mexico's imports, and (2) the conditions within Mexico and abroad, both as regards government policy and political stability, which have induced foreign private individuals and firms to invest substantial sums in long-term Mexican enterprise will not be changed in a way which would reduce the inflow of long-term private capital substantially below the prevailing rate of growth.

Finally, it will be recognized that it would be impossible to evaluate the effects on the Mexican balance of payments of such phenomena as occasional crop failures due to drought, hurricane, floods or pests. The effects on the balance of payments of such events in the period when they occur are real enough, but like windfalls from temporary price rises, they are transient and have only limited effects on long-run economic prospects. For much the same reason, short-term capital outflows, spectacular though their impact on the international accounts may be in any year, are considered manageable with available foreign reserves.

2. *Outlook for Exports*

Dependence on one country as the market for most of its export exposes the Mexican economy to special risks of fluctuations in the demand for its products. Mexico has, however, demonstrated unusual flexibility in adapting its exports to shifts in U. S. demand, and has succeeded in widening the variety of its exports in the process. By changing to canned meats when exports of live cattle became impossible, to frozen and cured meats when the market for canned meat collapsed, to henequen manufactures when exports of henequen fiber were declining, and by increasing the volume of exports of cotton, coffee, canned fish, tomatoes and oilseeds in lieu of chickpeas, bananas, textiles and other manufactures, Mexico has succeeded in more than offsetting declining demands for some of its traditional exports. Since the diversification of production which has enabled Mexico to expand its exports is increasing with economic development, Mexico's long-range prospects for earning additional dollars are good.

The shift in the composition of Mexican exports which occurred between 1939 and 1950 reflected trends which are likely to continue in the foreseeable future. The prospects for a long-term increase in production of minerals and petroleum for exports are not promising under conditions now prevailing in Mexico. Nor is any substantial increase in exports of manufactured products probable in the next decade in the absence of another major war or other artificially-induced shortage of goods, although some expansion in such exports is not to be ruled out. However, under favorable world conditions Mexican exports of agricultural, fish and meat products could increase appreciably over the next ten years, although not at the exceptionally high rate which has prevailed in the last few years.

a. Nonferrous Metals. Exports of Mexican nonferrous metals, like production, have fluctuated largely in accordance with changes in the world prices of these metals. In response to the demands of the present defense effort, Mexican production of zinc attained record heights in 1950, output of copper was 50% above 1936-1939 levels and that of lead 2% higher. Furthermore, by selling an increasing proportion of their lead and zinc production in European markets, Mexican producers have been realizing prices at a premium over the relatively high U. S. prices for these metals. For the duration of the current world emergency, prices promise to be sustained by heavy demand for stockpiling and civilian consumption, even if the European price differential should disappear. In view of rising consumption and gradual exhaustion of lead and zinc reserves in the United States, the prospects are favorable for a continuation after the emergency of relatively high export levels for Mexican lead and zinc even if some decline from present export levels takes place as a result of competition from U. S. submarginal producers (who may continue to receive protection) and from producers in other countries, particularly Canada.

But while world market conditions appear excellent, the outlook for increasing production is not promising because of the exhaustion of known high-grade ore reserves and the depressed level of mining investment. If railroad transportation, which has been a serious obstacle to the movement of minerals from the mines, could be improved, exports of industrial metals might increase by conceivably 5 to 10%. However, in the absence of additional investment in the mining industry which would open up new and accessible sources of minerals or increase output from present workings, Mexico will be doing well if it can maintain the volume of exports of nonferrous metals at, or even slightly below, present levels for any extended period in the future.

b. **Petroleum.** Unless a significant increase in the drilling of exploratory wells and the development of new oilfields changes the relationship between probable levels of production and domestic consumption, Mexico faces the prospect of a diminishing export surplus of petroleum in the immediate future and of a deficit after a few years.

It is not intended to suggest, of course, that a deficit in the Mexican balance of trade for petroleum and natural gas are inevitable. It must be recognized that a country with the potential petroleum reserves which Mexico possesses could reverse a downward trend, but excluding a lucky strike, it could only do so by a considerable increase in expenditures for exploratory drilling and the development of new fields. It would also be possible, even if it were unwise in the long run, to increase output appreciably for a few years by raising production at Poza Rica above the optimum level for long-run yields. Excluding these possibilities, however, it appears justifiable to discount the present level of receipts from petroleum exports after 1954 unless there is a basic change in the amount and character of investment in the Mexican petroleum sector.

c. **Manufactures.** Most of the future increases in Mexico's industrial production, like those in recent years, are likely to be directed towards domestic consumption and no important rise in exports of manufactured products during the next decade is foreseeable. After a setback in the immediate postwar period, when foreign demand for Mexican manufactures declined, industrial production again began to rise rapidly in 1948, and in 1950 reached record levels, 128% above 1939. In spite of this rise, exports of fabricated articles continued to decline almost steadily from $103 million in 1946 to $45 million in 1950. Thus, while the volume of industrial production was increasing at an average of over 10% each year from 1948 to 1950, the volume of exports of manufactured goods was falling simultaneously at an annual average of 18%.

Mexico is fortunate in being able to utilize domestically the growing output of its industry, since considerable difficulty would be encountered in expanding its foreign markets for manufactured goods at prevailing costs of production. As industrialized nations have resumed production after the war, Mexican exports of many manufactures which had increased to record proportions during the conflict have returned more or less to their prewar levels. Among these are beer, sandals and other leather goods, silver, jewelry, wool blankets, baskets and straw hats, although tourist purchases of such items somewhat offset the decline in exports of these articles. The export value of cotton, wool, silk and rayon textiles, which was equivalent to over 40% of all manufactures exported during the war, declined from $55 million in 1946 to $10 million in 1949, which was still much higher than the 1939 exports of $0.1 million. The same trend applied to henequen and ixtle manufactures, exports of which remained well above prewar levels.

Most Mexican manufactures compete, directly or by substitution, with goods produced in the United States or in other industrial countries. United States tariffs on manufactured goods, although generally higher than on primary materials, have been declining since 1934. However, as a result of the abrogation of the U.S.-Mexican Reciprocal Trade Treaty at the end of December 1950, increases in duties became effective for sandals, baskets and blankets. Therefore, unless Mexico can lower its selling prices, either directly or by reducing or eliminating export taxes, it is unlikely that it can again increase exports of manufactured goods to the United States appreciably above current levels. Neither can the outlook for a substantial expansion in exports of manufactures to Central America or other Latin American countries be considered particularly promising until a way is found of overcoming high transportation costs from the Mexican plateau, where most of the country's industry is located. The outlook is perhaps somewhat more favorable for increasing exports of some kinds of processed or manufactured goods including canned and prepared foods (meats, seafood, fruits and fruit juices), synthetic hormones and other pharmaceuticals, motion pictures, books, records, furniture and the like, but any increase in such exports is likely to make only minor additions to export receipts.

Exports of textiles increased by $2 million in 1950 over the previous year, perhaps in part because of the influence of the Mexican trade agreements program in promoting Mexican textiles abroad. It is possible that modernization and rationalization of the Mexican textile industry, long discussed but still in the incipient stage, and the advantage of an adequate supply of domestically-produced cotton, may enable Mexico to improve its competitive position in foreign markets for cotton cloth and yarn at some future time. For the time being, however, it is not inconceivable that further inroads in Mexico's textile exports will take place in view of the relative ease with which textile industries can be established in importing countries. Nor is the long-term prospect for Mexican henequen manufactures, consisting largely of cordage and binder twine, more hopeful. However, there is a small but steady market in the United States for prepared ixtle de lechuguilla, used as bristles for brushes (Appendix C).

On the whole, therefore, any increases in exports of processed or manufactured goods in the next ten years is likely to take place gradually, and in any case, will probably make relatively minor contributions to the Mexican balance of payments.

d. Agricultural and Related Products. On the other hand, there appears to be potential capacity to increase agricultural production for domestic consumption and export at a similar or even higher rate than in the past. Between 1939 and 1950, total agricultural production increased by 88%. However, while agricultural production for domestic consumption rose by less than the increase in total production (67%), agricultural production for export increased by 285%. The phenomenal rise in world prices for agricultural commodities made production for export attractive to farmers, who were helped substantially by public investment in irrigation and highways and private investment in small-scale irrigation, land clearing and farm machinery.

Opportunities to increase agricultural production for export are insured by the availability of a considerable amount of additional land suitable for irrigation and by the high level of public irrigation investments in recent years. These projects have yielded only a portion of their potential increase in production thus far. Further opportunities for expanding agricultural output exist through more widespread use of fertilizer, insecticide, improved plows and other implements, crop rotation and improved seed. In these fields, Mexican farmers have only begun to realize the benefits of improved agricultural practices. Although such innovations will necessarily take time, it seems fair to say that Mexico could continue to expand its agricultural production and exports if demand from abroad provided the necessary incentives.

Incentives are not lacking at the present time in the face of the strong world demand for raw materials and foodstuffs and restrictions in supply which have raised prices for Mexican agricultural commodities. As long as full employment conditions continue in the United States, the demand for Mexican exports will be strong. On the other hand, the world supply position should improve eventually. Moreover, the threat of the substitution of synthetics for such export commodities as chicle and henequen, always a possibility and already felt in the case of chicle, is especially great when prices are high. Mexico might thus encounter keener competition in export markets than in the past.

It is improbable, therefore, that world demand for Mexican agricultural products will continue to expand indefinitely in volume terms at the sizeable average of 15% per annum which has prevailed in recent years. Since over 80% of Mexican exports go to the United States, future demand for agricultural products is likely to move upward at a rate more nearly approximating the estimated future rate of increase of U. S. real income (3% per annum). If, in addition, allowances are made for the possibility of greater exports to Europe and other countries, as well as for other contingencies (such as increases in U. S. demand for strategic commodities), the actual rate of growth may exceed the expected rise in U. S. real income by two or three per cent per annum. On these assumptions, therefore, agricultural exports would increase by not more than six per cent per annum, on the average, during the next decade.

The rate of growth of a particular commodity, however, will depend on Mexico's ability to expand production of that commodity and on variations in demand for it abroad. The export prospects for specific agricultural foodstuffs and raw materials are discussed in some detail in Appendix C. In brief it may be said that a rise in exports is probable for coffee, rice, oilcake, flaxseed, bananas, pineapples, oranges, cacao, beef and shellfish. On the other hand, no substantial expansion in the volume of exports is foreseeable for tomatoes, green peppers, oilseed (other than flaxseed) and edible oils, chicle, live cattle, cotton ixtle de lechuguilla, ixtle de palma and zacaton root, while exports of chickpeas, green peas, hot dry peppers and henequen fiber are likely to decline.

e. Effect of Investment on Exports. Investment expenditures in Mexico sometimes have had the effect of reducing overall exports in the short-run. Thus, exports of petroleum products have been unable to keep up with the rise in production because of the phenomenal increase in domestic consumption, and some raw materials (e.g., hides and skins) which were traditionally exported have been absorbed to an increasing extent by domestic industry, thereby reducing the volume available for export. Partly because of rising domestic needs due to the country's economic development, it has been necessary in recent years to restrict or prohibit the export of many articles in order to maintain adequate supplies for domestic use.

Over a longer period of time, however, the effects of investment expenditures are discernible in a considerable increase in exports. Investments in agriculture for public and private irrigation, land clearing and machinery are largely responsible for the increases in the output of cotton, flaxseed, tomatoes and other export crops. Mainly as a result of investment expenditures, the volume of crops grown for export increased by an estimated 285% from 1939 to 1950 while production of crops consumed domestically rose by only 67%. The concentration on export crops has made it necessary to import more wheat than would have been required if land devoted to export crops had been available for the production of wheat. Even corn has had to be imported occasionally in spite of official efforts to divert production to foods for domestic consumption.

The situation in manufacturing, however, appears to be quite different. Considerable sums are being invested in industry but most of the output of Mexican manufactures is going for domestic use, even though the value of manufactures exported in 1950 was six and one-half times higher than in 1939. The rise in industrial production for internal consumption, while increasing the requirements for imports of some raw materials has diminished the need to import paper and pulp, chemicals, vegetable oils and other manufactured products.

The low level of investment in mining accounts in part for the stagnation in that area of the Mexican economy. However, the maintenance of copper exports, in spite of increasing domestic use of this metal, was due to the establishment of a plant for the processing of low grade ores. Investment has also played a part in increasing exports of zinc, although improvement in the price of this metal has been a more powerful element than new investment in increasing exports.

f. Export Outlook: Conclusion. The question of the probable rate of growth of all Mexican exports over the next decade may now be raised. Between 1947 and 1950, the volume of Mexican merchandise shipped abroad rose by an annual average of about 10.5%. In the light of the foregoing analysis it appears improbable that Mexico's exports, which have already increased by 50% in the four years 1946-1950, can continue to grow over the next ten years at such a high average annual rate.

The volume of Mexican mineral and petroleum exports will probably decline gradually over the next ten years. On the assumption that the secular growth in exports of manufactures will do no more than counter-balance any decline in mineral exports (a 1% decline in the value of mineral exports will require a 3% offsetting increase in exports of manufactures), any future expansion in the volume of exports will depend on the rate of growth of agricultural exports, which has been estimated at no more than 6% per annum for the next decade. Since agricultural exports account for about 50% of total exports, total exports may be expected to grow at a rate of about 3% per annum over the next ten years.

The point was made in dealing with the export prospects for petroleum (and it might have been made with equal force in the case of minerals) that a reduced rate of growth in Mexico's exports is by no means inevitable. If appropriate steps were taken, Mexican exports could grow at least as rapidly as in the recent past. Until such steps are taken, however, if the possibility of a renewal or perpetuation of artificially-induced world scarcities of foodstuffs and raw materials is excluded, it is difficult to see how Mexico's exports could grow more rapidly than 3% per annum over the next ten years, compared with 10.5% a year in 1947-1950. If 1956 is taken as a midpoint in the next decade, a 3% increase in exports at 1950 prices and export levels would increase exports from $534 million in 1950 to $640 million in 1956.

3. *Demand for Imports*

Continued growth of Mexico's population and real income per capita, as well as the present substantial rate of capital formation, would virtually assure a high demand for imports in the future. Experience has shown that despite import restrictions, high tariffs, and currency devaluation, as national income has expanded, the proportion of it spent on imports has increased. Thus, while the real national product rose by only 76% between 1939 and 1947, the volume of imports rose by 190%. After 1947 import restrictions, higher duties and devaluation lowered the quantity of imports, although in 1950, when real national product was 114% above 1939, the volume of imports was still 138% higher than in 1939.

Even if the heavy strain on the balance of payments imposed by deficit financing of economic development is absent in the future, the structural characteristics of a developing economy are likely to result in substantial imports. The high rate of investment in Mexico entails considerable imports of machinery, industrial equipment and other capital goods, which have fluctuated in recent years within a narrow range from 40% to 41% of the total value of imports (Tables 128 and 145). The ratio of investment goods imported into Mexico to total capital formation in the postwar period ranged from 30 to 35%, and averaged a little less than 32% for the years 1946-1950 (Table 145).

Domestic investment expenditures for wages and salaries, and for materials produced in Mexico increase the incomes of Mexicans, thereby expanding the demand for imports of consumer goods quite apart from direct expenditures abroad for imports of capital goods. Besides increasing import demand by raising consumer purchasing power, investment expenditures also accelerate population shifts from rural toward urban areas and from less to more productive agricultural regions and occupations and through changes in consumption habits which follow these shifts, increase further the demand for imports of consumer goods.

However, this view conceals the fact that in Mexico a small proportion of the population generated most of the increased demand for consumption goods. The high rate of investment and the insufficient level of voluntary savings produced a price inflation which altered the distribution of incomes in favor of the upper-income class, the group with the greatest tendency to import. Moreover, by raising prices for domestic goods, inflation also made imports relatively cheaper and stimulated purchases from abroad. Although demand for imports was reduced to some degree by higher tariffs and devaluation, increases in income and relatively lower foreign prices in some cases partly offset this reduction in demand so that import curbs and quotas had to be retained for more than two years after the peso was devalued. Once import restrictions were reduced, the pressure of rising incomes reasserted itself and imports again rose.

The Mexican Government has demonstrated, however, that it is not powerless to curb imports of consumption goods when they compete with imports of investment goods for limited foreign reserves and thus threaten the rate of capital formation and the balance of payments. Direct import curbs can always be applied to at least the 10% of total imports classified by the Bank of Mexico as luxuries. Mexico is also utilizing tariffs to promote the substitution of domestically-produced goods for imports. Sometimes higher tariffs have had the somewhat irrational effect of restricting domestic consumption (e.g., textiles) by increasing local prices without bringing about substitution of homemade goods.

Over a period of time, however, measures to restrict imports, together with credit and other measures to stimulate local production, have reduced imports of a series of commodities and led to their complete or partial replacement by articles produced in Mexico. Thus, Mexico now meets all or most of its requirements of vegetable oils, corn, sugar, copra, cacao, textiles and cement, all of which had to be imported at one time or another. Moreover, for several of these items potentialities exist for increasing exports. In some cases, notably corn and fats and oils, a balance has been achieved by restricting imports (imports of corn, tallow and lard are government monopolies) as well as by increasing domestic production. Although it has been possible to increase per capita consumption of some items in spite of import restrictions, in other cases (e.g., corn), per capita consumption declined. The general rate of consumption of agricultural products has increased, but the rate of growth has been declining.

Important reductions have occurred in recent years in the volume of agricultural imports and in the ratio of such imports to the total consumption of agricultural products. Although domestic consumption of agricultural products increased by 30% between 1944 and 1950, the volume of such imports declined by 29% in the same period. In 1944, 11% of the total consumption of agricultural products was supplied by imports; in 1950, only 6% of such articles came from abroad. With 94% of its total consumption of agricultural products provided by domestic production, Mexico is practically self-sufficient in food (Tables 47 and 54).

Nevertheless, imports of agricultural products constitute a sizeable expenditure for Mexico, imports of wheat alone amounting to $31 million in 1950. In terms of volume, imports of wheat constituted over 90% of 1950 imports of agricultural commodities, compared with less than 33% in 1939. Between 1939 and 1950, consumption of wheat increased by 111% and imports rose more than eight times. Possibilities exist for substitution of home-grown wheat for imported varieties, but the competition from other crops, particularly cotton and oilseeds, and the strong preference of the Mexican milling industry for imported varieties of wheat, are important obstacles to the complete elimination of wheat from the import list.

A significant decline has also occurred in the annual rate of growth of the value of imported raw and semi-processed materials in relation to that of imports of capital goods, which suggests that domestic materials are increasingly replacing imports. Between 1946 and 1950, the average annual rate of increase of capital goods imports was three times as high as the rate of increase of imports of raw and semi-processed materials. In part, this difference may reflect a lower rate of utilization of capital equipment in the postwar era; however, it is doubtful that under-utilization completely accounts for the difference, since imports of raw and semi-processed materials fell in greater proportion than imports of capital goods even though they included imports for inventories as well as for current use.

In spite of the probability that the trend toward replacement of imported commodities by products of domestic manufacture will be maintained, the volume of imports is not likely to decrease. On the contrary, it is probable that an increased amount of goods, particularly those needed for economic development, will be imported in the future. This is a tendency already apparent since the end of the war and one that may be expected to continue.

The rate of expansion of Mexico's demand for imports will depend in the future, as in the past, primarily on the growth of real incomes. Between 1946 and 1950, the real national product rose at an average rate of 6% per annum. If this average increase continued for some six years in the future, Mexico's gross national product would rise from 43.0 billion pesos in 1950 to 61.1 billion pesos in 1956 at constant prices.

On the further assumptions that (a) the ratio of capital formation to gross national product, which increased from 12% in 1946 to an annual average of 14% in 1947-1950, can be maintained at the same level in 1956, (b) the ratio of capital goods imports to gross domestic investment in 1956 will be the same as the average in 1946-1950 (32%), and (c) the trend toward substitution of domestic consumption goods for imports will continue in the future at the expected rates, total imports in 1956 would approximate $880 million (compared with $597 million in 1950) without taking account of changes in the overall price level.[1]

4. *Mexican Trade and U. S. Defense Program*

In the next two or three years, however, the Mexican pattern of trade may deviate from the long-term pattern because of the effects of the U. S. defense program. Higher demand for foodstuffs, minerals and other raw materials will probably increase receipts from exports during most of the emergency period. At first, increased export earnings are likely to be spent and foreign reserves reduced in order to increase imports in anticipation of future shortages. After 1951, the composition of Mexican imports from the United States will probably undergo a significant change, and the proportion of investment goods to total imports is likely to decline. To the extent, therefore, that imports of capital goods are insufficient or that substitutions cannot be obtained from industrialized countries in Europe or produced domestically, Mexico may have to postpone some investment projects and reduce the rate of investment. If present defense plans remain unchanged, however, a substantial rise in U. S. industrial capacity should enable the United States to supply the goods required for economic development after 1952, although domestic and deferred foreign demand may cause some shortages even in 1953. Shortages of goods and higher incomes from increased exports will accentuate the danger of inflation during the defense emergency and large consumer goods imports may be required to counteract foreign and domestic pressures on the price level. Nevertheless, it may be possible for Mexico to retain some of the increased earnings from exports for the realization and expansion of development programs after limitations on U. S. supplies of capital goods have disappeared.

5. *Terms of Trade*

For the time being, however, the scarcity of capital goods will prevent Mexico from taking the fullest advantage of the considerable improvement in its terms of trade which occurred in 1950. Available data on Mexico's terms of trade with the rest of the world are unsatisfactory, but on the basis of estimates made by the Combined Mexican Working Party, Mexico's terms of trade with the United States changed very little between 1939 and 1943 because increases in Mexican export prices were for the most part matched by equivalent rises in import prices (Table 146). In 1944, however, export prices failed to keep pace with import prices and Mexico's terms of trade deteriorated to 95% of 1939 levels, although some recovery occurred in 1945 when they moved upward to 98.5. Since 1946, however, the increase in prices which Mexico receives for the goods it sells abroad has been consistently higher than the increase in prices paid for imports. Moreover, the movement of the index of Mexico's terms of trade has been steadily upward even in 1949, when a fall in export prices was matched by an even greater decline in import prices. The greatest improvement in Mexico's terms of trade in many years occurred in 1950 with the beginning of the defense program in the United States. A relatively small fall in import prices combined with a considerable increase in export prices (reflecting the phenomenal rise in prices of agricultural commodities in that year) caused the index of the terms of trade to move upward from 125 (1939 = 100) in 1949 to 152 in 1950.

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[1] The method used to compute the balance of payments effects of increases in investment expenditures is detailed in Appendix D. The way in which the estimate of imports in 1956 was obtained may be summarized as follows: The average ratio of capital goods imports to gross domestic investment in 1946-1950 (31.9%) was applied to a gross domestic investment of 8.55 billion pesos (14% of the gross national product in 1956) to obtain capital goods imports of 2.73 billion pesos. On the basis of the assumption that continued economic development will result in the future, as it has in the past, in the substitution for some consumption goods imports of articles of domestic produce, it appeared reasonable to expect that the marginal propensity to import such goods would decline from an average of .114 for 1946-1950 (1948 was excluded from the average because of the distortion introduced in that year by devaluation) to .100 in 1956. When this ratio is applied to the estimated increase in gross national product from 1950 to 1956, the increase in consumption goods imports is found to be 1.80 billion pesos. Adding this figure to imports of consumption goods in 1950 (3.06 billion pesos) places total consumption goods imports in 1956 at 4.86 billion pesos, which combined with estimated 1956 imports of capital goods (2.73 billion pesos), gives total imports in 1956 of 7.59 billion pesos ($878 million).

Reserves accumulated during the war when export prices were low were spent by Mexico on imports which were priced well above wartime levels. On the other hand, the advantageous course of the terms of trade during the postwar period, coupled with a higher volume of exports, helped to promote Mexican economic development by increasing its purchasing power over investment goods abroad and by lightening the burden of service payments on foreign debt.

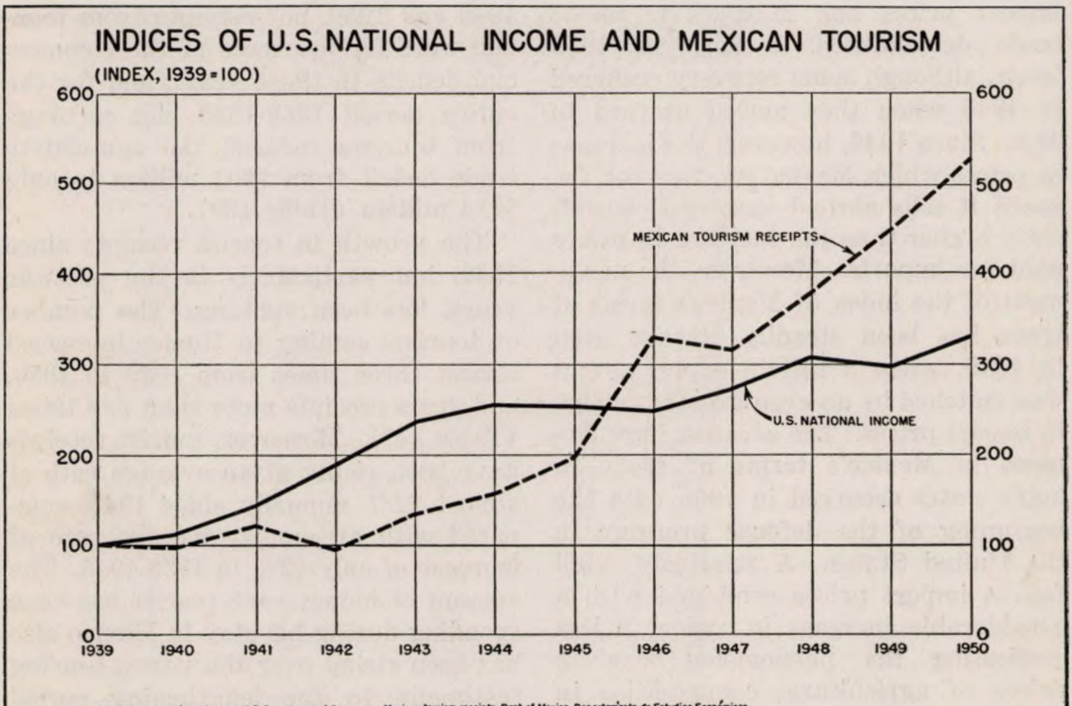
6. *Tourism*

a. Expansion of Tourist Industry. Mexican imports are much larger than exports only in terms of merchandise trade; if "exports" of tourism are added, the picture changes. Thus, in 1949 and 1950, net receipts from tourism were far in excess of the commercial deficits in those years, and for the entire period 1939-1950, net earnings from tourists reduced the cumulative trade deficit from $904 million to only $114 million (Table 123).

The growth in tourist receipts since 1939, but particularly in the postwar years, has been striking. The number of tourists coming to Mexico increased almost three times from 1939 to 1950, and gross receipts more than five times (Table 147). Moreover, tourist receipts have been rising at an average rate of almost 22% annually since 1946, compared with an annual average rate of increase of only 12% in 1939-1945. The amount of money each tourist has been spending during his stay in Mexico also has been rising over the years, bearing testimony to the lengthening period which the average tourist spends in Mexico and the souvenirs he "exports." In 1939, per capita expenditures by tourists amounted to $221; by 1948 they increased to $439, but thereafter declined to $416 in 1950 as a result of the depreciation of the peso, particularly after 1948.

Except in 1947 and 1948, when the proportion declined to a little over 80%, about 95% of the tourists entering Mexico were residents of the United States. There is no doubt, therefore,

CHART 23



INDICES OF U.S. NATIONAL INCOME AND MEXICAN TOURISM

(INDEX, 1939 = 100)

SOURCE: U.S. national income, U.S. Department of Commerce; Mexican tourism receipts, Bank of Mexico, Departamento de Estudios Económicos.

that the upward movement of incomes in the United States has had an important influence upon the growth of the Mexican tourist industry. Yet, it is significant that the actual year-to-year changes in U. S. national income seem to have had little effect on the direction or magnitude of Mexican tourist receipts. In 1946, to take one of the several examples, U. S. national income declined by 1.3%, but in that year Mexico experienced the greatest rise in tourist receipts in its history, when they increased by 66% from $61 million to $101 million; the following year, U. S. national income rose by 10%, but tourists spent 4% less than in the preceding year; since 1947, the annual rate at which Mexican tourist receipts have expanded has been three times as great as the rate at which national income has been growing in the United States (Table 148 and Chart 23).

The Government has recognized the importance of the tourist industry to Mexico and, through a Federal Tourist Bureau in the Ministry of Interior, has been advertising the attractions of Mexico abroad, not only as a vacation land, but also as an ideal place for conventions, business meetings, scientific gatherings, Pan-American Olympic Games, and as a permanent residence for U. S. pensioners. To meet the needs of the increasing number of individuals who are visiting Mexico each year, the official Tourist Bureau is encouraging increased construction of hotels and motor courts, restaurants, and other tourist facilities, some with the aid of government loans. The Bureau estimates that 700,000 tourists will come to Mexico in 1954 and that they will spend 2.5 billion pesos ($289 million). If tourist receipts should continue to expand at the 1950 rate (which at 18.1% was the lowest since 1947), this estimate would be exceeded. Mexico's proximity to the United States, its ever-widening network of good roads (the road from Guadalajara to Nogales on the Pacific coast, scheduled to be opened in 1953, will undoubtedly increase the number of tourists from the west coast of the United States), and improved accommodations and other facilities should attract an increasing number of visitors each year. As long as tourists find peso prices attractive, and world uncertainties reduce Europe's attraction to Americans, the number of tourists who choose Mexico as a vacation place will continue to increase. On the other hand, increases in the price level which are not offset by corresponding rises in U. S. prices, such as have been taking place recently, will undoubtedly reduce the number of American visitors to Mexico. If these factors are taken in balance, and keeping in mind that the Mexican tourist industry is still young, it would appear that Mexico could count conservatively on an average increase of at least 12% per annum in gross tourist receipts (compared to the annual average increase of 18.8% in 1948-1950) for the next five or six years. On this basis, gross receipts from the tourist industry in 1956 would amount to $321 million. If allowance is made for a doubling of Mexican travel expenditures abroad, from $6 million in 1950 to $12 million in 1956, Mexico's net realization from tourism in 1956 would amount to $309 million, as compared with $156 million in 1950.

b. Effect of Investment on Tourism. It is not possible, of course, to determine exactly the extent to which receipts from tourism have increased as a consequence of investment expenditures on Mexican highways, hotels, restaurants, sanitation, and other facilities which are used by tourists. Some idea of the importance of new and improved highways in attracting tourists is revealed in the growing proportion of tourists who enter Mexico by automobile. In 1944, when 126,000 tourists came to Mexico, only 30% of the total ventured on the relatively few roads then in existence; in 1950, the number of tourists increased to 390,000, and 59% (almost double the 1944 proportion) came by automobile on new and improved highways (Tables 109 and 147). Part of the increase is undoubtedly due to the larger number of cars and the greater availability of gasoline in 1950 than in 1944, but the steady increase in the postwar period indicates that the larger number of new and improved highways have contributed to the increase in tourist automobile traffic.

Information on the growth of investment in hotels and other tourist facilities is lacking, although it undoubtedly has been great. The official Mexican Tourist Bureau estimated in 1951 that there were some 2,000 hotels, furnished apartments and other housing units for tourists throughout the nation in which about 2 billion pesos had been invested. While this estimate must have been based on very crude data, it is fair to say that without considerable investments in tourist facilities, Mexico could hardly have accommodated the rising number of tourists who have visited the country in recent years. It appears probable that the most important single factor limiting the further expansion of the tourist trade is the lack of facilities to accommodate a substantial increase in the number of tourists.

7. *Personal Remittances*

Increased use of Mexican seasonal agricultural workers (braceros) in the United States during the defense emergency period is also likely to bring Mexico higher receipts from personal remittances over the next few years. Farmers in the southwestern part of the United States have been using Mexican seasonal laborers for many years, but a considerable increase in the employment of such workers began in 1943. As a result of the large influx of Mexican workers into the United States, personal remittances rose to a peak of $55 million in 1945. Thereafter, the amounts remitted declined and in 1950 remittances were $19.4 million (Table 149).

Mexico recently signed an agreement with the United States for a six-month trial period which covers the hiring of Mexican workers by American farmers and provides for higher wages and better employment conditions than have prevailed during the postwar years. U. S. officials estimate American requirements for Mexican seasonal workers at 200,000 annually in 1951 and 1952, and for as long thereafter as the labor shortage persists in the United States. With improved wages and working conditions and a greater number of workers employed in the United States than ever before, remittances should increase substantially. It is possible that the sums sent to Mexico by braceros may again reach the high levels of the war period, and that Mexican labor may continue to be used in the United States in larger numbers after 1953 as a consequence of higher requirements for U. S. manpower in American military forces. Even so, it must be assumed that sooner or later within the next five years the stringency in the U. S. labor market will be relieved and the demand for Mexican seasonal workers will decline to former levels. By 1956, therefore, remittances from Mexican workers in the United States may be lower than in the immediate future, but they should not be less than $25 million.

8. *Other Receipts*

Except for deficits of $0.1 million in 1943 and $2.1 million in 1950, Mexico has had a consistent surplus of miscellaneous items in its current account every year from 1939 to 1950, which averaged about $1.7 million per annum for the entire period and $1.4 million in the postwar years 1946-1950. Most income in this category comes from foreign diplomatic expenditures in Mexico, consular receipts and film royalties. A Lend-Lease settlement concluded in February 1951 between Mexico and the United States provides for the liquidation of $5.3 million of Mexican debt in pesos between 1951 and 1956, with $750,000 payable in 1956. Since the U. S. expects to use the pesos it receives to meet its diplomatic expenses in Mexico, net "other receipts" in 1956 are likely to be somewhat under $1 million.

9. *Effect of Foreign Investments and Loans on Balance of Payments*

a. Role of Foreign Private Investments and Loans. Long-term foreign private investments, although varying considerably from year to year, have been increasing. For the period 1939 to 1949, such investments (including reinvested earnings and intercompany accounts) netted $225 million and averaged $21 million per annum. From 1939 to 1944, they averaged $16.5 million annually, but the annual average invested by foreigners in Mexico from 1945 to 1949 increased by over 50% to $25 million. If the characteristically erratic movements of intercompany accounts are excluded from these figures, the increase in foreign direct investments and reinvested earnings becomes more striking. Thus, between 1939 and 1944, investments plus reinvested earnings averaged only $10 million annually while in the years 1945-1949, the annual average increased to $22 million, or about 130% higher than the yearly average in the preceding period.

Except for $10 million in 1942, no government or government-guaranteed loan from foreign sources was received prior to 1945 during the 1939-1950 period. Nevertheless, the total amount obtained between 1942 and 1950 was almost $3 million greater than amortization payments on the official debt from 1939 to 1950. As a consequence of renewed government borrowing abroad, the importance of long-term capital inflows in the balance of payments increased considerably in the period 1945-1950 as compared with 1939-1944, and this increase was greater than the rise in net private investment between the two periods:

Total Long-Term Capital Inflows
in 1939-1944 and 1945-1950
(Millions of Dollars)

	1939-1944	1945-1950	Increase
Private	98.9	141.2	42.3
Official	–33.8	36.4	70.2

b. Service on Foreign Investments and Loans. In every year since 1940, payments for interest, dividends and profits on private long-term direct investments significantly exceeded private long-term capital inflows. For the period 1939-1950 as a whole, such payments ($622 million) were more than two and one-half times greater than net foreign long-term private investments including reinvested earnings ($240 million). In the same period, however, government and government-guaranteed loans from external sources ($166 million) were only $32 million below total official service payments of interest and amortization amounting to $198 million.

Transfer obligations for complete service of public and private external indebtedness averaged about $110 million annually for 1948 and 1949, which was about 19% of current international receipts. However, these figures merely indicate Mexico's potential liabilities and not the actual cost of debt service in foreign exchange since they include reinvested profits of private foreign-owned companies which never were transferred as well as amortization payments on public debt, which in the period 1939-1950 were lower than the total inflow of new official loans. If, therefore, these capital transactions are excluded, leaving only private interest and dividend payments and interest paid on official debt, the total transfer obligation for all private and public external indebtedness is reduced to an average of $73 million annually and to 12% of current receipts for 1948 and 1949. In 1950, total interest paid on public and private indebtedness declined to $61 million, largely because of a fall in investment charges in the private sector. This factor, as well as the rise in current receipts, was responsible for a reduction in the ratio of public and private interest charges to only 9% of current receipts (Table 150).

c. Future Foreign Investments and Service Payments. The largest investments by foreigners in Mexico during the postwar years have been made in manufacturing and commerce, with smaller amounts in mining, transportation and electric power in the order given. The expansion of U. S. demand for strategic and critical materials may cause some acceleration of foreign investments in Mexican mining and smelting, and possibly some secondary investment in power and transportation if these are required to increase output of materials needed by the United States in connection with the defense effort. It is also possible that Mexican agriculture might benefit if the United States again begins to promote production of guayule rubber and other agricultural raw materials.

It would be difficult, however, to predict the character, timing or magnitude of such investments, and in any case, no concrete evidence of accelerated foreign interest in the fields named is apparent in Mexico at the present time. Under the circumstances, it would be advisable to limit expectations of future rises in private direct investment by foreigners in Mexico to 10.7% per annum, the average rate at which such investments (excluding intercompany accounts) expanded between 1941 and 1949. The high returns in Mexican industry and commerce are well above the levels prevailing abroad and hence exceedingly attractive to foreigners. It is to be expected, therefore, that foreign direct investment in Mexico will continue to expand at least at the rate of the past. On the basis of a 10.7% rise in foreign direct investments each year over the 1941-1949 average,[2] such investments would come to $38 million in 1956.

Service payments on foreign private investment have been growing at an average annual rate of 9.2% from 1941 to 1949. If the same assumptions are used for service payments as were used in the case of foreign investments, transfer payments for interest and dividends (including reinvested earnings) in 1956 would amount to about $147 million.

10. *Official Foreign Debt*

a. Origin of External Debt. Mexico's external debt contains three components: (a) old Government and railroad debts, (b) obligations arising from the nationalization of foreign-owned properties, and (c) new loans.

(1) *Old Debts*

External foreign borrowing by the Mexican Government began in 1824, but the heaviest borrowing from abroad took place between the years 1886 and 1913, almost entirely during President Diaz's regime. From 1842 until 1947, foreign bonds were issued to an estimated equivalent of about $1 billion, but this amount includes many conversion or refunding issues.

A series of defaults and adjustments on the external debt occurred from 1827 to 1867. In 1914, the entire debt went into default and remained so, except for short intervals, until 1942 for the Government debt and 1946 for the railroad debt. The agreement signed in November 1942 between Mexico and the International Committee of Bankers on Mexico, now in effect, provided for retirement of assented non-enemy-owned Government bonds at the rate of one peso per dollar of nominal principal with payments in either pesos or dollars, at the option of the holder, at a rate of 4.85 pesos to the dollar. Redemption of secured issues began in 1948, and is to be completed by January 1, 1963. Unsecured issues are to be redeemed by January 1, 1968. The agreement also stipulated that arrears of interest accrued prior to 1923 are to be liquidated for 0.1% or 0.2%, according to the class of bonds; arrears of interest from 1923 to 1943 are to be liquidated for 1% of their face value.

The agreement now in force for settling the foreign railroad debt for the nationalized railroads was signed in February 1946. Bondholders were offered a choice between two plans with payments in either pesos or dollars, at the holders' option, at a rate of $1 for each 4.85 pesos. Plan A provides for retirement of bonds at the rate of one peso per dollar of nominal principal and payment of interest at 4.35% on the reduced principal. The bonds are to be redeemed over a period of 29 years by a sinking fund of 1.78% of the total modified principal. Plan B provides for no future interest payments, but the utilization of the same amount of money applied for principal and interest under Plan A to retire bonds by purchase or redemption at prices rising gradually over a period of 29 years from something over $21 for each $100 of nominal value to par. Arrears of interest on the railway obligations were settled on the same terms as those on the Government debt.

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[2] The average for these years appeared to be a better base than the 1950 increase for making estimates for the future for both foreign direct investments and service payments because the 1950 data do not include reinvested earnings; the increases in foreign direct investment and service payments between 1939 and 1940 were excluded from the base period because they were abnormally large.

(2) *Nationalization Obligations and Claims*

The external petroleum debt arises out of the nationalization of foreign-owned oil company properties in March 1938. The Mexican Government settled with the Sinclair Oil interests for $8.5 million in 1940. A settlement with the other U. S. oil companies followed in 1942, the compensation being fixed at $23,995,991 plus interest at 3% from March 18, 1938, the date when the properties were nationalized. In an agreement concluded in August 1947 with the Mexican Eagle Oil Company, Ltd., in which British and Dutch oil interests were represented, compensation for nationalized properties in Mexico was set at $81,250,000, plus interest at 3% from March 18, 1938.

In addition to settling the oil claims, Mexico agreed by the Convention of November 19, 1941 to pay the sum of $40 million over a period of time in full settlement of agrarian and other claims of U. S. nationals who lost property under the Mexican agrarian program.

(3) *New Loans*

In the 1940's Mexico again began borrowing abroad. The loans, aside from those for currency stabilization from the U. S. Treasury Stabilization Fund and the International Monetary Fund, were for economic development. The chief sources of funds were the Export-Import Bank and the International Bank for Reconstruction and Development, but loans were also obtained from private banks and companies.

b. Magnitude and Composition of External Debt. On June 30, 1951 the total external official debt of Mexico was estimated at $506.2 million, of which $196.8 million was undisbursed and $309.4 million was outstanding (Table 151). With the exception of $735,000, the entire amount of the foreign debt is payable in dollars and may be summarized as follows:

	Millions of Dollars		
	Outstanding	*Undisbursed*	*Total*
I. *Old Debts*			
A. Government debt	43.4	. . .	43.4
B. Railway debt	45.0	. . .	45.0
II. *Nationalization Obligations and Claims*			
A. Oil settlements	86.9	. . .	86.9
B. Mexican American Agrarian Claim	11.5	. . .	11.5
III. *New Loans*			
A. Export-Import Bank	74.1	160.0	234.1
B. International Bank	23.3	36.8	60.1
C. Private Banks	21.5	. . .	21.5
D. Private companies	3.6	. . .	3.6

	Millions of Dollars *Outstanding*	*Undisbursed*	*Total*
IV. *Miscellaneous*	0.1	...	0.1
Total	309.4	196.8	506.2

c. Official External Debt Service. On the basis of expected rates of utilization of the undisbursed portion of Export-Import and International Bank loans, and of the present outstanding debt, total service obligations for 1951 amount to the equivalent of $40.7 million. Beginning in 1952, however, total payments move upward to $50.3 million and, after reaching a peak of $50.6 million in 1954, fall to a level of about $47.3 million in 1956, when $13.7 million will be interest and $33.6 million amortization. After 1956, payments continue to decline: in 1957 they drop to $43.7 million and in 1958 to $39.7 million, gradually reaching $35.0 million by 1963. A sharp reduction to $21.0 million occurs in 1964, another to $10.5 million in 1969, to $3.8 million in 1975 and to $2.2 million in 1976, the year when the entire debt is scheduled for liquidation (Table 152).

d. Future Loan Disbursements and Amortization Payments. From 1951 through 1954, disbursements of unused portions of loans already extended by the Export-Import Bank and the International Bank to the Mexican Government or guaranteed by it are expected to total $191 million. On the other hand, amortization payments on official indebtedness from 1951 through 1956 are scheduled at $193 million, only $2 million above the undisbursed portion of existing Export-Import and International Bank loans:

Estimated Official Loan Disbursements for Existing Loans and Total Amortization Payments on the Mexican Debt in 1951-1956

(Millions of Dollars)

Year	*Disbursements*	*Amortization*
1951	42.3	26.5
1952	86.1	34.1
1953	55.3	30.6
1954	7.5	35.0
1955	...	33.0
1956	...	33.6
Total	191.2	192.8

Without further borrowing, therefore, receipts from foreign loans already secured will practically equal amortization payments on external official loans through 1956. In view of Mexican intentions to maintain investment expenditures at a high rate in the future, it is to be expected that Mexico will continue in the next decade to seek additional foreign loans which will at least equal amortization payments in that period. A borrowing policy based on balancing new loans with amortization payments on existing debt would be quite practicable for Mexico, since it merely involves stabilization of the foreign debt service at a level which Mexico is able to manage. Under these circumstances, it would be reasonable to assume that in 1956, for example, receipts from official borrowing abroad will not be less than amortization payments.

11. *Hypothetical Balance of Payments for 1956*

At various points in the discussion of the long-run prospects for the Mexican balance of payments estimates were made of the outlook for different components of the balance of payments in 1956, a year standing approximately midway between 1951 and 1960. On the basis of the most important of these estimates, exports would rise by 3% a year to about $640 million, imports to $880 million, gross tourist receipts by 12% a year to $320 million and remittances from Mexicans working in the United States to $25 million; foreign private investment would increase at 11% annually, the same rate as in 1941-1949, to about $40 million; and foreign private investment service by 9% to about $145 million, while official borrowing would at least equal amortization payments.

It is now possible to construct from these estimates a hypothetical balance of payments for 1956 which would show what the Mexican balance of payments might look like in that year if there were no appreciable departures from the trends on which the estimates were based, and if 1950 price levels at home and abroad remained unchanged:

HYPOTHETICAL BALANCE OF PAYMENTS FOR MEXICO IN 1956[1]
(Millions of Dollars)

	Receipts	*Payments*	*Net*
I. *Current Transactions*			
Merchandise exports and imports	640	880	—240
Foreign travel	320	10	310
Interest on official debt	...	15	— 15
Direct investment service[2]	...	145	—145
Personal remittances	25	...	25
TOTAL CURRENT TRANSACTIONS	*985*	*1,050*	— *65*
II. *Long-term Capital Movements*			
Private direct investment (net)[2]	40	...	40
Government loans and amortization	35	35	...
TOTAL LONG-TERM CAPITAL MOVEMENTS	*75*	*35*	*40*
III. *Summary*			
Net on Current Account			— 65
Net on Long-term Capital Movements			40
DEFICIT			— *25*

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[1] The assumptions regarding the development of the gross domestic product, gross national product, gross domestic investment and imports on which the hypothetical balance of payments is based are detailed in Appendix E.

Private short-term capital movements are excluded on the assumption that such inflows would be added to foreign reserves from which private short-term capital outflows would be covered. It is assumed also that official short-term capital expenditures will be covered from foreign reserves. Grants are not shown for want of a dependable basis for prediction. All figures are rounded to the nearest multiple of 5.

[2] Includes reinvested earnings but excludes intercompany accounts.

On the basis of these data, the trade deficit would amount to $240 million, but net foreign receipts from tourists of $310 million would be more than enough to make up for the difference between exports and imports. Nevertheless, receipts from travelers in Mexico and from braceros in the United States would be insufficient to counterbalance service on public debt and foreign private investment, with the result that current expenditures in 1956 would exceed corresponding receipts by $65 million. However, long-term inflows of capital would reduce the deficit in current account, leaving the deficit in Mexico's international transactions only $25 million.

It should be emphasized that this hypothetical balance of payments is not a forecast of the Mexican balance of payments in 1956. It rests on assumptions which, while indispensable as analytical tools, may well be upset by the actual course of events. Not only may future events reverse some of the predicted trends, but prices in 1956 are unlikely to be the same as in 1950. Disproportionate price inflation in Mexico at existing exchange rates could easily double or treble the balance of payments deficit.

On the basis of the assumptions made, the 1956 deficit on current account would amount to only $65 million. If the terms of trade continue to move in Mexico's favor, and there are those who argue that the long-run outlook for producers of primary materials is brighter than for manufacturing countries, the deficit might be reduced or eliminated; conversely, a decline in Mexico's terms of trade would increase the deficit. In 1950, many of the raw materials Mexico produced were selling at premium prices as a result of the initial spurt in stockpiling activities and the low cotton acreage allotments in the United States. As a consequence, Mexico's terms of trade with the United States reached their most favorable level in that year, when prices received for exports were over 170% above 1939 and prices paid for imports from the United States were less than 80% above the 1939 level (Table 146). It is questionable whether raw material prices can be maintained indefinitely at 1950 levels; although metal prices are still up, some prices (notably cotton) have already declined considerably and declines in other commodity prices are to be anticipated. Moreover, the rises in raw material prices and wage rates during the second half of 1950 caused a rise in prices of manufactured goods in the U. S. in 1951. These commodities constitute the bulk of Mexico's imports, and further price increases are not unlikely. It is probable therefore, that barring another upsurge of demand for raw materials induced by war or other catastrophe, the Mexican terms of trade will deteriorate from the 1950 level.

Even a relatively small fall in export prices, or a corresponding rise in import prices could radically affect the balance of payments, even though the terms of trade remained more in favor of Mexico than in 1939. For example, a decline in export prices of only 10% (which is not altogether improbable) without any change in export quantities or in import prices or volume would leave the terms of trade 36% higher than in 1939, but nevertheless would increase the trade deficit from $240 million to $304 million, and the deficit on current account from $65 million to $129 million, leaving a total deficit of $89 million in the balance of payments:

EFFECT OF A 10% DECLINE IN EXPORT PRICES ON THE HYPOTHETICAL BALANCE OF PAYMENTS FOR 1956
(Millions of Dollars)

	Receipts	*Payments*	*Net*
Merchandise exports and imports	576	880	—304
Other current transactions	345	170	175
Total Current Transactions	*921*	*1,050*	*—129*
Net Long-term Capital Movements ...			*40*
DEFICIT			— 89

On the other hand, a rise in import prices of 10% (also quite possible) with no change in the volume of imports or in the quantities or prices of exports would leave the terms of trade 38% above those in 1939, but would increase the trade deficit to $328 million, the current accounts deficit to $153 million and the overall deficit in the balance of payments to $113 million:

EFFECT OF A 10% RISE IN IMPORT PRICES ON THE HYPOTHETICAL BALANCE OF PAYMENTS FOR 1956
(Millions of Dollars)

	Receipts	*Payments*	*Net*
Merchandise exports and imports	640	968	—328
Other current transactions	345	170	175
Total Current Transactions	*985*	*1,138*	*—153*
Net Long-term Capital Movements ...			*40*
DEFICIT			—113

Actual experience shows that alterations in the terms of trade are generally the result of simultaneous changes in both export and import prices. It is worth noting, however, that where, as in Mexico's case, imports are larger than exports, an increase of a given proportion in import prices causes a greater deficit in the balance of trade than a decrease of similar proportions in export prices. Nevertheless, any decline in the terms of trade (even if export prices remain relatively higher than import prices) threatens the Mexican balance of payments by reducing the quantity of imports which can be purchased by a given volume of exports.

For Mexico, however, the overriding problem is not the elimination of its trade and current accounts deficits, but their restriction within manageable limits. A deficit in trade and current transactions of a developing country which relies on foreign investment and loans to supplement domestic capital formation can hardly be considered an abnormality. It is, in fact, difficult to conceive how Mexico could make effective use of the long-term funds it receives from abroad for economic development unless it were prepared to incur deficits in its trade and current transactions to finance an excess of imports over exports.

12. *Mexico's Capacity to Service Additional Foreign Investment*

In the hypothetical balance of payments for 1956, interest charges on official loans and interest and dividends on foreign direct investment are shown as equal to 13.2% of current receipts. This proportion is higher than in 1950, but about the same as in 1949 (Table 150). Interest and dividend payments on foreign investment would amount to 11.7%[3] of current receipts, and interest obligations on Government and government-guaranteed debt would be equivalent to only 1.5% of current receipts.

a. Foreign Private Direct Investment. A direct investment service ratio of 11.7% is not excessive compared with similar ratios in other underdeveloped countries utilizing substantial amounts of foreign private capital, or in relation to the Mexican direct investment ratio in recent years or to total current receipts envisaged in 1956. Out of a group of nineteen less-developed countries in Latin America, Africa and Asia, eight countries had lower foreign investment ratios in 1948 and 1949 than 11.7%, but eleven had higher ratios and the average for all countries was 18.9% in 1948 and 16.6% in 1949 (Table 153). Moreover, an investment service ratio of 11.7% would not be substantially above the average Mexican investment service ratio for the four years 1947-50 (to which the Mexican balance of payments is already adjusted) and would be lower than the ratios in one of those four years:

Year	*Investment Service Ratio*
1947	12.0
1948	10.4
1949	11.3
1950	7.2
Average for all years:	*10.2*

Nor should it be unduly burdensome for Mexico to meet private investment service obligations of $115 million, if current receipts amounted to $985 million and other current payments and capital movements were maintained at the approximate levels assumed in the tentative balance of payments for 1956.

An obligation to pay $115 million might prove insupportable, however, if current receipts did not reach the expected level in 1956 and investment service was undiminished. If, for example, tourist receipts in 1956 were sharply lower than expected, but all other items remained as estimated, imports would have to be cut back, foreign reserves reduced by the deficiency in tourist receipts, or compensatory borrowing from the I.M.F. or the U. S. Treasury Stabilization Fund would be necessary in order to meet the foreign investment service. According to available data, which are inadequate, an average of only 4% of Mexico's total private investment service payments (in 1948-1950) are in the form of fixed-obligation payments, the remainder appearing to be made up of dividends on equity investments. Nevertheless, Mexico's experience does not support the view that the service of equity investments imposes less strain on the balance of payments than that of fixed interest obligations since years of maximum profit by no means coincide with years of maximum export receipts (Table 122).

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[3] Excluding reinvested earnings estimated on the basis of the average of reinvested earnings to total foreign private investment service in 1946-1949 (20.7% of total foreign investment service or $30 million).

Mexico's capacity to absorb additional foreign private direct investment therefore depends, in the short-run, on its ability to meet higher service payments in the face of possible wide fluctuations in export and other receipts. Over a longer period, however, the value of new foreign private investment for Mexico can be determined only by ascertaining the extent to which such investment makes a net addition to the country's output.

b. Official Loans. Annual interest obligations on Mexico's present official foreign debt over the next ten years (1951-1960) are estimated to range from $9.3 million (in 1960) to $17.1 million (in 1953), and to average $13.5 million for the entire period. In 1956, interest payments will amount to $13.7 million, about 1.5% of estimated current receipts in 1956. From either a numerical or proportional point of view, therefore, Mexico's obligations to pay interest on official external debt cannot be considered an excessive burden on current receipts. Nor is it likely that additional foreign borrowing which would increase interest charges, even substantially, would raise any serious problems insofar as the transfer of higher interest payments was concerned.

Since expected official investment expenditures in future years make it improbable that Mexico will find it desirable or feasible to reduce the size of its external debt for some years to come, it may be expected that Mexico will endeavor to offset amortization payments on its official foreign debt by new borrowing. In effect, this would involve the maintenance of foreign debt service at about the present levels as long as the requirements for economic development make it impractical and unwise to divert resources from investment to reduction of the external debt. As long as Mexico is able to service its existing debt, no insurmountable difficulties should be met in obtaining the new loans to carry out such a policy. It would be more reasonable to suppose, however, that Mexico will seek to increase the present level of its foreign debt in order to obtain more funds to advance the country's development at rates of interest below those paid to foreign private investors in Mexico.

Nonetheless, additional foreign borrowing for economic development can be expected to strain the balance of payments. Imports of investment goods paid for by foreign loans do not have an adverse effect on the balance of payments. However, since foreign loans have been used almost invariably to increase investment by more than the amount of the loans through credit expansion, they have made necessary increased domestic expenditures which, by expanding incomes beyond the original outlays, exerted pressure on the balance of payments by increasing the demand for imports of consumption goods. Under these conditions, the higher the amount borrowed from abroad, the greater the adverse impact on the balance of payments. Unless adequate measures are taken to counteract the resulting strain on the balance of payments, the normal inflow of capital may give way to capital flight and a cessation of lending from abroad and the burden of servicing the external debt may be greatly increased.

In the absence of exchange available to pay for more imports of consumer goods, therefore, the amount of additional foreign loans which Mexico can absorb will closely depend on the extent to which measures were adopted in the short run to curb unnecessary imports and, in the long run, to increase the capacity to export and to promote economically-desirable substitution of domestic products for imports. With 10% of its imports normally in the form of luxury goods and almost 95% of its food requirements satisfied from domestic production, Mexico has considerable leeway for reducing imports, if necessary, without either curtailing economic development or cutting consumption below subsistence or incentive levels.

In the past, imports were curtailed by drastic measures such as import embargoes and devaluation of the monetary unit which sometimes created much economic disturbance. Mexico's economic development has now reached a stage where the same ends could be achieved by methods which would cause a minimum of disturbance. By means of a progressive tax on incomes which, without impairing incentive, siphoned off excess purchasing power from the income groups which exert the greatest demand for imports, imports of consumer goods could be restricted while, at the same time, the Government would obtain funds for investments.

The limitation of imports of consumer goods is a *sine qua non* for Mexico's economic development, but it is not an end in itself. Since the ultimate purpose of economic development is to raise the standard of living, lower consumption can be defended only as a temporary expedient necessary to the progress of the country. Moreover, a certain amount of "unessential" imports are needed even during the investment period to provide the rewards for work and initiative without which capital formation may lag.

Investment policy should therefore be formulated to take account of the need to increase exports to pay for imports which cannot or should not, by their nature, be produced at home. This implies that investment should be regulated, not only to yield maximum increases in incomes, but also to avoid pressure on the balance of payments to an extent which would make it necessary to impose restraints on imports over extended periods of time. If, for example, agricultural and industrial production does not increase at adequate rates as a consequence of disproportions in the investment pattern, the balance of payments will surely suffer. With the prospect that agricultural exports will increase in the future at a much lower rate than in the past, it would seem possible to improve the outlook for exports only by directing official policies toward counteracting the downward trend which is foreseeable in exports of petroleum and nonferrous metals.

Accordingly, if Mexico directed its investments towards increasing the country's export potential and the economic production of goods now imported; and if, in addition, the balance of payments were safeguarded by taxes which reduced the demand for unessential imports, additional external borrowing for development should not be harmful. In other words, the amount which Mexico can safely borrow for development over the next decade, will depend on the extent to which Mexico can avoid misdirection of capital and undue pressure on the balance of payments by better coordination of investment and by an effective fiscal policy.

CHAPTER XI

The Outlook

A. INTRODUCTION

In the twelve years from 1939 to 1950, Mexico experienced unprecedented economic growth. The country's productive capacity was greatly increased and, except in mining, major gains in output were made in every sector of the economy. Imported capital goods paid for with a growing volume of exports at favorable prices laid the foundations of industrialization. It is especially noteworthy that this advance was not made at the expense of Mexico's agricultural production, which expanded greatly. Indeed without an increase of agricultural exports, imports of capital goods would have had to be lower and industrialization could not have progressed as rapidly as it did. While industry and agriculture were developing, petroleum, electric power and highways were also making exceptional advances. Even in railroads, in which investment lagged, the total volume of goods and passengers rose appreciably.

While private initiative has played an important part, there can be no doubt, nevertheless, that the Federal Government, through its policies and investments, has determined the rate and direction of economic development in 1939-1950. This development was achieved against a background of scanty resources and technical difficulties. If therefore, some imbalance appeared in the development of economic resources, it needs to be viewed in perspective, with due account taken of the conditions under which development proceeded and the considerable progress made over the entire period.

The unparalleled development in 1939-1950 was only made possible, on the one hand, by forcing savings up and by curtailing consumption and, on the other hand, by concentrating on investment opportunities which offered quick and substantial returns. In the future, a flow of savings which it will be hard to increase will be confronted with investment opportunities which will yield slower returns. This new phase has already been foreshadowed by a tapering-off of the rate of increase of real income per capita in 1945-1950, due partly to a more rapid growth of population, but mostly to a slower increase in total output.

B. THE PROSPECT

It was possible to obtain high and immediate productive results from investments during the war years as long as public facilities had not reached the limits of their capacity. After the war, the need for large investments in transportation and communications, electric power, water supply and sewerage became increasingly pressing; many of these investments did not promise quick returns, but without them productive investment opportunities suffered and yields from investments in industry, mining and other sectors of the economy began to decline.

In response to the new situation, investments in transportation, communications and electric power were increased and in 1950 amounted to 27% of total investment compared with 20% in 1946 (Table 17). Although large, these investments were insufficient to relieve the railroad situation or to eliminate electric power shortages. Investments in water supply and sewerage also increased but much remains to be done throughout the country. Recent estimates indicate that a solution of the serious water and sewerage problem in the Mexico City area, which cannot be postponed much longer, may alone require the expenditure of hundreds of millions of pesos. A considerable increase in outlays must therefore take place for public facilities and works (social overhead) in the next few years.

Higher capital expenditures than in 1939-1950 will also be required in the future for the development and conservation of natural resources. Substantial investments for the exploration of new oil fields are now imperative to secure a continued rise in production over the next ten years. In mining also the development of new reserves is necessary if production of non-ferrous metals is not to follow the downward trend already shown by the precious metals. Although potentialities for irrigation and hydroelectric development remain great, the best sites have already been taken and further development will tend to be costlier than in the past. The Mexican Government is also becoming increasingly concerned with the need for reforestation and soil conservation and expenditures for these purposes will undoubtedly have to increase soon.

In 1950 private construction had not yet recovered from the slump that began in 1947. Investment in public buildings was also low. In 1949-1950, all forms of construction accounted for 16 to 17% of total investment, a percentage lower than in any previous year in the 1939-1950 period (Table 17). It is becoming increasingly difficult to subordinate the demand for low-cost housing, hospitals and schools to economic development to the same extent as in the past, and increased expenditures for these purposes are almost certain in the next decade.

Mexico has been accumulating capital stocks. As the age of its capital equipment increases a larger part of total investment than in recent years will have to be devoted to maintenance and replacement. Inadequate maintenance of capital equipment in the past also means higher future expenditures for this purpose.

There are consequently strong indications that the change which occurred in the Mexican investment pattern in 1947-1950 will be extended over the next five to ten years. Greater emphasis will have to be given to public facilities and social welfare projects, which can only yield appreciable returns over many years, and to maintenance and replacement of capital equipment. By itself, such a change would reduce the immediate returns from investment compared with the high yields in the past. On the other hand, most of these expenditures cannot be postponed much longer without an even greater decline in productive results from total investment.

An increase in expenditures for public facilities and other projects with lower immediate yields would require a rise in the rate of investment to prevent a fall in the rate of growth of national income. In addition, further increases in the rate of growth of population would require more investment to maintain the past level of growth of per capita income. It is probable that the death rate will continue to decline, although not at the same rate as in 1940-1950. If it fell at one-half that rate and the birth rate remained unchanged, the annual rate of increase in population would amount to 3.1% in 1956. In that year, a hypothetical increase of 2% in per capita real income would require a rise in total income of 5.2% compared with only 4.1% in 1940. While the death rate will probably continue to decline in the next few years, it should soon reach a level from which further declines will be much smaller. Moreover, a fall in the birth rate could counteract the effect of the declining death rate on per capita income, although there has been no indication that such a change is likely.

In 1939-1950 domestic savings paid for most investment in Mexico. The savings of the postwar period, which rose greatly over those of the war years, were largely stimulated by deficit financing and credit expansion and increased further as a result of the unequal distribution of incomes, import restrictions on consumer goods, and devaluation. The rate of savings reached in the postwar period was high compared with other countries and with previous savings in Mexico. In these circumstances Mexico will do well to maintain the postwar rate of savings during the next five or six years. The fact that restrictions on consumption have already been in effect so long makes it harder to retain them indefinitely.

The stagnation of private savings could be counteracted by a tax policy designed to increase public savings without impairing enterprise. There is wide scope for such a policy in view of the uneven distribution of income and the low taxes on income and property. Tax measures could also discourage the construction of luxury dwellings and other non-productive investment, and they could minimize the indirect effects of the investment process in creating inflation and impairing the stability of the balance of payments.

Nevertheless, with savings near their upper limit for the time being, it is improbable that even a sound tax policy could raise the current rate of savings substantially in the next few years. Under these circumstances, Mexico faces a situation in which the major source for financing investment—domestic savings—cannot be expanded easily while the need to increase long-term investment and the growth of population demand higher investment if per capita income is to continue to rise as in the past. This dilemma can be met by a policy which, on the one hand, minimizes the required rise in investment and, on the other, broadens the basis of financing.

The need for increased investment could be limited by avoiding errors of planning and execution. The inadequacy of the railroads and the failure to develop sources of raw material as industry expanded helped to keep output well below capacity in 1939-1950, especially in the iron and steel industry. Returns from irrigation investments were reduced by delays in the construction of distribution canals and other complementary works and by the lack of measures to promote better farming. Expensive port works were of little use because of the inaccessibility of their hinterlands; and the slow construction of feeder roads prevented main highways and railroads from attaining maximum usefulness. On the other hand, some of the long-term investments, including some large-scale irrigation projects and some highways which duplicated railroad lines, could have been postponed without hindering economic development.

Some investments made in 1939-1950, including those for many large irrigation projects, highways, hydroelectric plants and industrial expansion, have so far yielded only a part of their potential contribution to output. In the next decade, increases in output from these investments should partly counteract the expected decline in other investment yields. Moreover, measures could be taken to enhance their effects. Relatively minor investments in complementary works, such as distribution canals, feeder roads and auxiliary industries, or measures to improve agricultural methods and to make more economical use of irrigation water, could do much to increase output.

There are also other fields where small expenditures or organizational improvements might produce substantial gains. Use of fertilizer, improved seed and crop rotation would undoubtedly increase agricultural production; in the railroads and in the textile industry, administrative reorganizations without appreciable expenditures could greatly improve productivity.

With savings temporarily stabilized and increased demand for investment funds, greater reliance will have to be placed on foreign financing in the next few years. While foreign private investment will probably continue to contribute to Mexican industry and commerce it is likely to remain of little importance in mining, electric power and petroleum. On balance, it is unlikely that foreign private investment will play a more important part in the next decade than in 1939-1950, when it financed 4% of total investment. The most pressing needs for additional investment in the immediate future are for public facilities, most of which are within the official domain. Until these investments have been made, the scope for additional private investment in many fields will be curtailed. Consequently, the principal increase in foreign funds will have to come from government borrowing, which has been a relatively unimportant source for financing investment in the past.

C. CONCLUSION

The return from total investment in the next decade will depend on the extent to which official resources and (through appropriate policies) private funds are able to exploit the possibilities for offsetting lower immediate yields from increased outlays for public facilities, other long-term investments and maintenance and replacement of capital equipment. The task is different and more difficult than in the past when circumstances favored the selection of projects which yielded high returns from low outlays. In 1939-1950 Mexico did not need an agency to coordinate investment in order to maintain a high rate of output. The Mexican economy has now reached a point where the uncoordinated selection of projects is no longer likely to bring the same results as in the past.

The time has come, therefore, when Mexico may want to abandon the project-to-project approach to economic development and look at the organic whole. This would not mean that a rigid "plan" must be imposed from which no deviation would be permissible. On the contrary, it is important that shifts in the world situation or changed needs within the country be reflected quickly in economic policy. This requires that each project and economic policy must be justified by the extent to which it can contribute to economic development and that savings be directed into appropriate channels. In short, what is needed is a development program.

Such a program is a prerequisite for a rational determination of Mexico's capacity to absorb and service additional foreign loans for economic development over the next decade. From several points of view, the outlook for the balance of payments is favorable. Mexico's external debt service is low in relation to current foreign receipts and the balance of payments is well-adjusted to meeting charges on the existing external debt. An additional safety factor can be found in the fact that the balance of payments has shown flexibility in the face of adverse developments. Moreover, potentialities for further improvement are clearly indicated.

In spite of these favorable factors, however, over the next ten years the balance of payments must be considered exceedingly vulnerable in the absence of a development program. Without counteracting development and fiscal policies, the balance of payments will always be subject to the same kind of pressures which lowered reserves to precarious levels in 1947 and 1948. With the possibilities of increasing domestic savings circumscribed for the next few years, foreign financing could contribute to a solution of the problem. However, foreign funds could not be used as an alternative to taking steps to counteract reduced returns from long-term investments. The large amount of capital imports which would be required in the absence of such measures to sustain a satisfactory rise in per capita income are not likely to be forthcoming when returns from investment are reduced and savings are at a standstill. Moreover, service requirements on loans of such magnitudes, even if they were obtainable, would undoubtedly cut into the amount of savings available for future investment. Under such circumstances, the advantages of foreign loans become as uncertain for the borrower as for the lender.

On the other hand, if foreign financing were an element in a broad development program which included adequate measures to offset declining investment yields, Mexico could expect to achieve a reasonably satisfactory rate of increase in per capita income over the next ten years. If, in addition, steps were taken to adopt a tax system which reduced the inflationary effects of investment expenditures, the balance of payments would offer no serious obstacle to the service of additional foreign loans.

While the outlook for Mexico's economic development remains basically sound, it may be concluded that Mexico's capacity to absorb and to service new investments in the next ten years depends to a great extent on the adoption of a sound development program, supported by adequate fiscal measures.

Appendix A

ESTIMATE OF REAL NET DOMESTIC PRODUCT, 1939-1950

Real net domestic product was estimated by the Combined Mexican Working Party on the basis of volume indices for the components of domestic product. Volume indices were available, or could be computed by the Working Party, for components which together accounted for 58% of the value of net domestic product in 1949. A general price index computed by the Working Party was used to deflate the remaining part, principally comprising commerce and private services. The volume indexes were then weighted by the shares of the respective components in the value of net domestic product in 1949 to obtain the index of real net product.

A detailed description of the indices used follows:

Agriculture

A volume index computed for its national income estimates by the Bank of Mexico, Department of Economic Studies, National Income Section, was used.

Cattle raising

Since data on volume of production in this field was unavailable, a price index for cattle products was computed by the Combined Mexican Working Party by weighting the prices of all cattle products included in the wholesale price index for 210 commodities of the Bank of Mexico with the weights used in that index. On the basis of this price index and of the value data for the component, a volume index for cattle raising was computed.

Forestry

A simple volume index computed by the Combined Mexican Working Party was used.

Fisheries

A volume index computed by the Combined Mexican Working Party was used (cf. Table 57, "Volume and Value of Fish Catch, 1940-1949").

Mining

The volume index for mineral production of the Bank of Mexico, as published in its annual reports, was used.

Petroleum

A volume index was computed by the Combined Mexican Working Party which included production of refined petroleum and of crude petroleum not refined within the country. These series were weighted respectively by prices of refined petroleum for domestic use and export and crude petroleum exports. Prices for 1950 were unavailable. For this reason, the average ratio for 1939-1949 was used. Production of natural gas, of little significance compared with petroleum, was not taken into account.

Electric power

An index for electric power generated was used (cf. Table 69, "Electric Power, Installed Capacity, Generation and Consumption, 1939-1950").

Building and construction

The value of construction was deflated by an index of the cost of private construction in the Federal District computed by the Bank of Mexico, Department of Economic Studies, National Income Section.

Industry

A volume index computed for its national income estimates by the Bank of Mexico, Department of Economic Studies, National Income Section was used.

Transportation and communications

A general index of the volume of transportation and communications was computed by the Working Party which included the following five sub-indices:

Railroads: net ton-kilometers of freight and passenger-kilometers
Highways: truck-kilometers, bus-kilometers and passenger car-kilometers
Airlines: freight and express tonnage and passenger-kilometers
Maritime transport: total freight tonnage handled by ports and total number of passengers using ports
Communications: number of telegraphic messages, number of cable messages, number of domestic long distance telephone calls, number of international telephone calls and number of telephone units

Wherever possible data on volume of traffic were used. In the case of airlines, however, no data were available for ton-kilometers, and tonnage alone had to be used. Data were interpolated or otherwise estimated for the following items: highway traffic in 1939, 1940, 1945, 1947 and 1950; telegraphic and cable messages for 1950; long distance domestic and foreign telephone calls for 1939 and 1940 and number of telephone units for 1950.

The weights were established as follows: railroad freight tonnage and the number of passengers carried by railroads were each given a weight of 100, and the other items were related to these two according to tonnage or to number of passengers. For highway traffic, no tonnage figures were available. It was assumed that each type of highway transportation had a weight of 50 in 1939 through 1942, was lower from 1943 to 1945 because of wartime shortages, and increased gradually from 1946 to reach a weight equal to railroad traffic in 1950. In the case of communications, the weight for the number of telegraphic messages was fixed arbitrarily at 5 and the other forms related accordingly, except the number of telephone units, which was used as an indication of inter-urban communication and weighted arbitrarily at 20.

Government services

An index of average Government salaries was computed by the Working Party on the basis of information on average salaries for different groups of employees and on the number of employees in main groups as obtained from the Ministry of Finance and Public Credit. This index was considered representative of salaries paid by State Governments and the Federal Government. The salaries index was used to deflate salary payments to obtain a volume index for government services. The volume index thus obtained showed a considerable decrease in the volume of Government services in 1946 because an increase in salaries of Federal employees included in the index first became effective at the beginning of the second quarter of that year and a similar increase in the salaries of State Government employees did not take place until the following year. The figure for 1946 was corrected by taking a weighted average of the 1945 salaries and the higher 1946 salaries, taking account of the length of time each salary level was in effect and the approximate number of State Government employees in relation to Federal Government employees.

Rent

An index of floor space of buildings was used. The index was computed by the Working Party on the basis of the floor space of buildings constructed each year in the Federal District and of assumptions made on the proportion between construction in the Federal District and in other parts of the country used by the Bank of Mexico, Department of Economic Studies, National Income Section in estimating the value of annual construction in the country as a whole. The floor space of buildings existing in 1939 was estimated on the assumption that the ratio between value of existing buildings and their floor space was the same as the ratio between the value of new buildings constructed in 1939 and their floor space. An estimate was available of the replacement value of existing buildings in the country in 1939, based on the housing census of 1939. The floor space of buildings constructed each year was then added to the floor space of buildings in existence in 1939 to obtain a volume index.

Commerce and private services

For the remaining part of the domestic product, comprising 42% of the total, no volume or price indices were available which applied directly to the various components. This part includes, besides commerce and private and professional services, smaller items like credit institutions, services of public institutions, interest, other items and adjustments. In order to obtain a price index which could be used to deflate this part in its entirety, a price index for goods and another for services were computed on the basis of volume indices and value data for other components of the domestic product. The price index for goods included the components for agriculture, livestock, forestry, fisheries, mining, petroleum, building and construction, and manufacturing. The price index for services included the only three service components for which data were available: transportation and communications, Government services and rent. There proved to be a considerable difference between the goods and services indices, the former showing a price increase of 209% from 1939 to 1949, the latter a price increase of 128%.

The union of these two price indices into a single deflator for commerce and private services was made on the assumptions that:

1) prices of commercial services had followed the prices of goods, and
2) prices of private services had followed prices of the three groups of services for which data were available.

These assumptions resulted in weights of 75 for the price index of goods and 25 for the price index of services.

In order to evaluate the possible influence on the results of the calculations of this partly arbitrary choice of assumptions, tentative calculations were made on the basis of other assumptions which showed that the choice of assumptions within reasonable limits did not affect the results to a degree which would warrant an appreciable shift in any important conclusion reached.

When these estimates of real product were made, the Bank of Mexico had not completed its calculations of the national product for 1950. An approximate estimate of real net domestic product for that year was made by the Working Party on the basis of available volume indices. For forestry and fisheries, which are not of great importance, estimates were made and the figures used for agriculture and industry were preliminary. For commerce and private services an estimate of the increase in volume from 1949 to 1950 was made on the assumption that the ratio between increases in volume of this component and all other components was the same in 1949 to 1950 as in 1948 to 1949.

Appendix B

LIST OF TREATIES, AGREEMENTS, ARRANGEMENTS, MODUS VIVENDI AND COMMERCIAL TREATIES BETWEEN MEXICO AND OTHER COUNTRIES IN FORCE ON THE 13TH OF JULY, 1951

Latin American Countries

Provisional Commercial Arrangement Between the United Mexican States and the United States of Brazil. Made through an exchange of notes dated in Rio de Janeiro, December 7, 1931, and extended through a new exchange of notes dated in Mexico, July 30, 1936.

Commerical Treaty Between the United Mexican States and the Republic of Costa Rica. Signed February 4, 1946; ratified March 16, 1950.

Commercial Modus Vivendi Between the United Mexican States and the Republic of Chile. Extended July 1, 1950.

Treaty of Friendship, Commerce and Navigation Between Mexico and the Republic of Ecuador. Signed July 1, 1888.

Modus Vivendi Between Mexico and the Republic of El Salvador. Signed in 1935 and extended on December 14, 1950.

Treaty of Friendship, Commerce and Navigation with the Dominican Republic.[1]

European Countries

Commercial Treaty Between the United Mexican States and the Republic of Czechoslovakia. Signed in México November 9, 1949.

Agreement Over Customs Tariffs Between Mexico and France. Ratified through an interchange of notes dated in Mexico May 20 and 22, 1930.

Commercial Agreement Between the United Mexican States and the Italian Republic. Signed in Mexico September 15, 1949.

Commercial Agreement Between the United Mexican States and the Kingdom of the Netherlands. Signed January 27, 1950.

Commercial Arrangements Between the Swiss Confederation and the United Mexican States. Signed September 12, 1950.

Commercial Treaty Between the United Mexican States and the Popular Federative Republic of Yugoslavia. Signed March 17, 1950.

Commercial Agreement Between the United Mexican States and Belgian-Luxembourg Economic Union. Signed ad referendum September 16, 1950.

Other Countries

Commercial Treaty Between Mexico and Canada. Signed February 8, 1946.

Source: Bank of México.

[1] Data obtained from Ministry of Foreign Affairs, Foreign Trade Council.

Appendix C

EXPORT PROSPECTS FOR SELECTED COMMODITIES

1. *Manufactures*

Henequen manufactures. Mexican exports of henequen manufactures largely consist of cordage and binder twine. The United States, which is the chief market for binder twine, has adequate capacity to manufacture all the binder twine it uses, and imports binder twine only during periods of labor stringency. Normally, therefore, the Mexican product would face severe competition in the U. S. market and this was a factor in the decline in exports in 1949 and 1950. The U.S.S.R. was a large purchaser of henequen cordage prior to 1950 and in that year the U. S. took considerable quantities as a result of increased business activity. Sales of henequen cordage may be maintained for a few years during the emergency, but since users in the United States will take henequen cord only when sisal is unavailable, exports of henequen cordage are likely to decline over a longer period, unless the U.S.S.R. returns as a large buyer.

Ixtle de lechuguilla. Mexico's small but steady market in the United States for prepared ixtle de lechuguilla (used for bristles in the manufacture of brushes), may be expected to continue in the future, but it is unlikely that any important expansion in this field will take place. In 1950, exports of this product amounted to $1.6 million.

Candelilla wax. In 1950, Mexico also exported about $4 million of candelilla wax, of which it is the sole producer. As long as the price for this product is in line with that of carnauba wax, with which it competes, candelilla wax should continue to find a secure market, but for this commodity also there appears to be little opportunity for any appreciable increase in the exports.

Lumber and hardwoods. Exports of lumber and hardwoods, which rose to over 80,000 linear meters in 1949 and 1950 from 35,000 linear meters in 1948, are likely to decline hereafter because of restrictions on exports imposed by the Mexican Government to conserve dwindling forest reserves.

2. *Foodstuffs*

Coffee. The market outlook over the next three to five years for Mexican coffee, a mild type somewhat similar to the kinds grown in Colombia and Central America, is bright. Largely as a result of the increase in prices, exports of this crop yielded $45 million in foreign exchange in 1950, almost seven times the 1939 export value, while the quantity of coffee exported rose by only 31%. Only 50% of the increase in the volume of coffee exports, from 34,600 metric tons in 1939 to 45,400 tons in 1950, came from expanded production, the remainder being diverted from domestic consumption. Since October 1949, however, an estimated two million coffee trees have been planted in Mexico and the production from these trees should begin to be felt in the next year or two. As long as prices remain firm, therefore, Mexico's receipts from coffee exports should increase gradually. However, most other producing countries also are believed to be planting trees, and if this is so, the increased supplies will eventually affect prices. Should this occur, higher Mexican production may offset some of the reduction in earnings due to a fall in price.

Rice. The outlook for an increase of rice exports is less promising than in the case of coffee. Exports of rice rose from insignificant amounts in 1946 to a high of 41,000 tons and $6.4 million in 1949; in 1950, they declined to only 27,500 tons, valued at $2.8 million. Prospects for a secure market for Mexican rice, which is on a competitive level with the U. S. and Siamese varieties, are more favorable in the Far East than in the Western Hemisphere. In order to meet the competition, however, selling prices would have to be lower than those which now prevail. Under these circumstances, and in the face of rising domestic demand, it is doubtful whether Mexico can be converted into a permanent exporter of important quantities of rice, although a moderate increase in exports is quite possible.

Chickpeas. The long-term future for chickpea exports is also obscure. Although a substantial quantity of chickpeas is sold to Cuba, Spain is Mexico's major customer for this commodity. In 1947 and 1948 under the terms of its payments agreements with Spain, Mexico was able to dispose of large amounts of chickpeas at attractive prices (which yielded $10.6 million in 1947 and $8.4 million in 1948). When Spain had consumed its credit under the agreement, however, exports dropped to about $2 million in each of the years 1949 and 1950. In spite of reduced exports, production of the export variety of chickpeas in 1949 and 1950 continued at high levels, although below those in 1947 and 1948, and a surplus of 70,000 tons piled up in warehouses between 1948 and 1950. The accumulation of this surplus was a prime reason for the signing of a new payments agreement with Spain in March 1951. Under the terms of the agreement, Spain is to buy 35,000 tons of chickpeas in 1951 and a minimum of 20,000 tons per annum thereafter in exchange for such Spanish goods as Mexico is willing to accept. These exports (together with expected sales to Cuba) should eliminate most of the surplus and provide an outlet for a part of future production. Past experience with Spain has demonstrated that sales to that country are made on credit and that payment in the form of acceptable goods may be made long after the exports have been completed. It would appear, therefore, that prospects for chickpea exports will remain clouded as long as Mexico must depend on a customer with limited ability to pay, and that it would be unrealistic to depend on chickpea exports for a steady or significant contribution to receipts.

Fresh vegetables. The bulk of Mexican exports of fresh vegetables (largely tomatoes, and some peas and green peppers) is shipped in the winter and early spring, mostly to the United States (but also to Canada) where the Mexican vegetables supplement production in Texas, Florida and Cuba. Mexico has succeeded in reducing Cuban competition, but when the winter vegetable crops grown in the southern part of the United States are good, Mexican vegetable exports are apt to be relatively low; conversely, adverse weather conditions in U. S. producing areas result in larger Mexican exports at relatively high prices. Nevertheless, the outlook for maintaining tomato and green pepper exports appears good. However, the future for Mexican green pea exports is not too bright because of the growth of the frozen pea industry in the United States which prefers to use peas grown in the northern part of the United States. As a consequence, it appears likely that the demand for Mexican peas may decline in the future from the 1949-1950 average of about 3,000 tons to 1,500 or 2,000 tons.

In June 1950, the United States Congress passed a law providing for the orderly marketing of perishable vegetable products. While the law is not designed to eliminate imports of fresh vegetables into the U. S., it is intended to bring about a reduction in shipments from abroad when domestic production of fresh vegetables is adequate to meet U. S. demand. A one-year agreement under the new law was signed recently by Florida tomato growers and representatives of Mexican tomato exporters. The agreement, which is voluntary, sets quotas on Mexican tomato exports in exchange for Florida producers' support in Congress for a 50% reduction in U. S. import duties on Mexican tomatoes (which would reduce the tariff to the level prevailing before the U. S.-Mexican reciprocal trade agreement was abrogated in December 1950). The contract would not become effective until the tariff is reduced. At the time this was written, Mexican tomato producers had not yet ratified the agreement and some producers had indicated their reluctance to do so. In spite of the new law, it appears probable that Mexico can continue to hold her gains in the market but exports of fresh vegetables may be expected to continue to fluctuate from year to year.

Dry Peppers. Mexico also exports hot dry peppers to the United States market, where she has enjoyed a monopolistic position for this product. Exports expanded from a prewar average of only 83 tons to an average of 880 tons in 1946-1950. In 1950, however, Japan's reentry into the U. S. market had an adverse effect on exports of the Mexican product, which declined to 750 tons from 1,010 tons in the previous year. Although the market can be expected to be good as long as U. S. purchasing power remains high, Mexico must expect increasing competition in the next few years from the Far East.

Animal and vegetable oils. In 1941, Mexico was a net importer of animal and vegetable oils to the extent of 70,000 metric tons. Under the stimulus of world shortages of fats and oils and high prices, including high cotton prices, Mexico expanded the production of vegetable oils from 56 thousand metric tons in 1939 to 164 thousand tons in 1950, and reduced net imports of animal and vegetable oils to only 3,700 tons in 1950. In 1948 and 1949, Mexico exported more fats and oils than she imported, and for 1951 it is estimated that net imports of oils and fats will amount to only 700 tons. Although import restrictions are partly responsible for the reduction in imports, major credit for the virtual balance in Mexico's fats and oils account is due to increased production.

In terms of oil equivalents, cottonseed was the chief oilseed produced in Mexico in 1950. Sesame was second, flax (linseed) third, coconuts fourth and peanuts fifth. The upward trend in production of oil-yielding plants applied to most such crops, including coconuts (copra), palm nuts, sesame, peanuts and cotton, but the greatest increase (either for oil-bearing crops or any other agricultural product) occurred in the case of flaxseed (linseed oil), the output of which rose 15 times from 1939 to 1950.

The Mexican Government is presently engaged in an ambitious program to increase the number of olive trees in the country from 4 million to 10 million in ten years. It is planned to utilize the olive oil for domestic consumption and for the canning of fish; eventually, it is hoped that Mexico will become an exporter of olive oil.

Most of the increased oil production was consumed at home, the expansion of exports being limited largely to flaxseed (two-thirds of total oil-seed exports) and peanuts (one-third of total). However, increased needs for domestic consumption are responsible for a steady drop in the value of oilseed and oil exports from $9.3 million in 1947 to $2.3 million in 1950. Because of rising domestic demand, exports of edible vegetable oils will be limited in the future to any excess over internal requirements. However, Mexico has a surplus of oilcake, largely cottonseed and sesame seed cake, and 1950 exports of feeds were $6.7 million compared to $0.6 million in 1939. As the production of oilseeds increases, exports of this commodity could increase. The United States produces most of the linseed oil it consumes and has imported only small quantities in the last two years. Mexico's market for this product is in Europe, principally Belgium. Unless Argentina reenters the market as a large supplier, Mexico should have no trouble in disposing of its surplus flaxseed.

Fruits. Mexican exports of tropical fruits, largely to the United States, consist for the most part of bananas and fresh and canned pineapple, although small quantities of oranges, lemons and other fruits are also exported. Banana exports have declined from a prewar average of 297 thousand metric tons to 79 thousand tons in 1950 because of the effects of sigatoka disease. The Mexican Government is providing funds to spray banana trees regularly in the State of Tabasco, the most important producing center, in order to protect the trees from the disease. Unless there is a further spread of sigatoka or an outbreak of Panama disease, some signs of which have been noticed, the outlook for increasing banana production appears good in the next five years because of increased plantings in the States of Colima, Nayarit and Tabasco. A good market exists for Mexican bananas in the United States and no problem is foreseen in disposing of any number of export quality bananas Mexico can produce.

Mexican exports of pineapples to the United States have customarily been made in bulk for canning purposes. Exports of canned pineapples began during the war and have increased steadily to $1.9 million in 1950. If demand in the United States should increase, Mexico would stand to benefit therefrom because she possesses a considerable amount of land on which production could be increased. However, Mexico must compete with the more acceptable fruit of Hawaii on a price basis. In this respect, Mexico has an advantage, since labor costs are lower than in Hawaii. Even though Mexico is also faced with two strong competitors in Cuba and the Philippines, a slow expansion of its pineapple market may be anticipated.

Among other fruits, the outlook for orange exports are the most promising. Until January 1950, when a sterilization plant was established in Mexico, exports of oranges to the U. S. were prohibited because of the prevalence of the blackfly in the Mexican fruit. With the U. S. market open and a high demand for oranges in the United States, the likelihood of increasing exports over the long run are favorable.

Cacao. Cacao is a minor crop at the present time, but is of potential importance as an export commodity. Production in 1950 of 6,700 tons represents a nearly fourfold increase over 1939. Many factors favor a large-scale expansion of cacao production. Extensive lands suitable for growing cacao trees, a supply of improved planting stock, absence of any major disease, desirable climate, and a labor supply at reasonable wages all put Mexico in a favorable position as a future producer of large quantities of cacao. However, the long-term outlook remains obscure because of the lack of credit facilities, competition for land from banana growers, and transportation problems.

Chicle. Mexico is the chief U. S. supplier of chicle for use in chewing gum. Exports of chicle increased during the war, but declined in the postwar period from $10.7 million in 1946 to $2.3 million in 1949 and $4.8 million in 1950. The fall in exports was due to the substitution of synthetics for chicle. The widespread use of such substitutes is likely to mean that chewing gum manufacturers will not use chicle to the same extent as before the war, although exports are not likely to fall much below 1950 levels.

Meat. Before the border was closed in 1946 as a result of the outbreak of foot-and-mouth disease in Mexico, a substantial export trade existed with the United States in live feeder cattle for fattening prior to slaughter. After the elimination of the trade in live cattle, packing plants were established in Northern Mexico, some with U. S. aid, to utilize available stocks of cattle. As a result, exports of canned, fresh, refrigerated, frozen and preserved meats almost completely replaced the traditional trade in cattle on the hoof. In 1951, canned beef exports were reduced to negligible quantities, but Mexican cured meat has found a market in the United States, where it is used by American meat packers in the manufacture of processed meat products. Frozen meats, which cannot be shipped to the United States because of foot-and-mouth restrictions against imports of fresh and refrigerated meat from Mexico, have been exported to Greece and Germany. The expansion of the Mexican meat-packing industry in Northern Mexico (there are now sixteen large plants which have been certified by the U. S. Department of Agriculture to export processed meats to the United States, and other plants are seeking such approval) as well as curtailment of cattle stocks by unusually severe drought conditions since 1948, makes it unlikely that exports of live cattle will be resumed on any large scale when the border is reopened. The world demand for meat will remain strong for some time and the major problem facing Mexican packers is to obtain an adequate supply of animals to keep their plants operating. Attempts are being made through the import of breeding stock to improve and increase the number of Mexican cattle. From the long range point of view the Mexican cattle population is increasing, but the shortage of feed grains in Mexico keeps the quality of meat low. When world supplies increase in the future, Mexico is likely to find it more difficult to dispose of its meat products at remunerative prices.

Shellfish. Exports of shellfish are likely to continue to expand but at a considerably lower rate than in the past. The most important variety of fish exported is shrimp, although abalone and lobster are also exported. Mexico should have no difficulty in disposing of all the shellfish available for export, even though in the case of lobster increased supplies in the U. S. market from Cuba, Mediterranean countries, Australia and South Africa may make it necessary to reduce prices to secure wider consumption. The basic obstacle to increasing exports is the difficulty of increasing the catch. Some improvement, particularly for shrimp, will probably occur over a longer period of time as a result of conservation methods now being employed and the opening up of new areas.

3. *Raw Materials*

Cotton. As the world's leading producer and exporter, the United States dominates the world cotton market. U. S. policy in any year is the chief force influencing the price which other producers will be able to get for cotton and the quantity which they will be able to dispose of in world markets. While this situation makes the quantity and value of Mexico's future cotton exports difficult to predict, it does make it clear that as long as the United States continues to protect the position of its cotton farmers, and there is little likelihood that it will not continue to do so indefinitely, Mexico will be able to dispose of the cotton she does not consume domestically. Such returns as Mexico was able to realize in 1950 ($139 million) are to be considered exceptional, being the result of the low cotton quotas established in the U. S. for that year, but the likelihood of a continuation of high future earnings from cotton is a distinct probability.

Henequen. Mexican exports of henequen have shown an irregular but downward trend for a long time, even before 1939. By 1949, the volume of henequen exports had fallen to 58% of 1939 levels, although production remained above the prewar level to supply larger quantities of the fiber to domestic mills for processing into henequen twine and cordage. Exports in 1950 were high because of increased demand following the Korean crisis. In view of the probable maintenance of agricultural production in the United States, which takes over 80% of henequen exports, the outlook is for a reasonably strong demand for henequen, largely for use in binder twine. For a longer period of time, however, the continued replacement in the United States of mechanical binders by combined harvester-threshers which do not use twine and the competition from sisal for the manufacture of other twine and cordage, will result in further reductions in henequen exports unless other uses can be found for the fiber.

Mexico also exports small but steady quantities of other unprocessed hard fibers, notably ixtle de lechuguilla, ixtle de palma, and zacaton root. While faced with the possibility of substitution, they appear to enjoy a stable market. Experiments with kenaf are also going forward in Mexico, where growing conditions appear to be ideal, but it will take a considerable number of years before appreciable earnings can be obtained from this fiber.

Appendix D

METHOD OF COMPUTING BALANCE-OF-PAYMENTS EFFECTS OF INCREASES IN INVESTMENT EXPENDITURES

In estimating the direct and indirect effects on the balance of payments of increases in investment expenditures, money data were used throughout. Over-all import data corrected by the Bank of Mexico were utilized, but corrections for capital goods and consumption goods were made by the Combined Mexican Working Party. The following procedures were employed:

I. *Direct effects*

On the basis of data for the years 1946 to 1950, total investment expenditures were responsible for imports of capital goods equal to 31.9% of the expenditures on the average, while increases in investment expenditures from one year to the next were responsible for imports of capital goods equal to 41.8% of the increase on the average.

The following two formulas were used for the calculations:

$$ca = \frac{C}{I} \text{ and } cm = \frac{\triangle C}{\triangle I}$$

where:

ca = average propensity to import capital goods

cm = marginal propensity to import capital goods

C = imports of capital goods

$\triangle C$ = annual change in imports of capital goods

I = gross domestic investment

$\triangle I$ = annual change in gross domestic investment

II. *Indirect effects*

The indirect impact of an increase in investment expenditures was estimated at 16.4% of the increase by the following method:

1. **Propensity to import.** On the basis of data for the years 1946 to 1950 (excluding 1948, which gave negative results for the marginal propensity to import because of the devaluation of the peso in that year) the average propensity to import was estimated at .116,[1] and the marginal propensity to import at .191. The following formulas were used:

$$ma = \frac{M}{Y} \text{ and } mm = \frac{\triangle M}{\triangle Y}$$

where:

ma = average propensity to import

mm = marginal propensity to import

M = money imports

$\triangle M$ = annual change in money imports

Y = money gross national product

$\triangle Y$ = annual change in money gross national product

However, it is the propensity to import consumption goods alone, and not the overall propensity to import both capital and consumption goods, which determines the indirect effects of investment expenditures on the balance of payments. On the basis of data for 1946 to 1950 (excluding 1948), the average propensity to import consumption goods was estimated at .072, and the marginal propensity to import consumption goods at .114 using the following formulas:

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[1] The average propensity to import, based on national income instead of gross national product is .129.

$$ba = \frac{B}{Y} \text{ and } bm = \frac{\triangle B}{\triangle Y}$$

where:

ba = average propensity to import consumption goods
bm = marginal propensity to import consumption goods
B = imports of consumption goods
$\triangle B$ = annual change in imports of consumption goods
Y = money gross national product
$\triangle Y$ = annual change in money gross national product

2. **Propensity to save.** On the basis of data for the years 1942 to 1950, the average propensity to save was estimated at .114, and the marginal propensity to save at .193. The following formulas were used:

$$sa = \frac{S}{Y} \text{ and } sm = \frac{\triangle S}{\triangle Y}$$

where:

sa = average propensity to save
sm = marginal propensity to save
S = gross national investment, which is equal to total public and private domestic savings
$\triangle S$ = annual change in gross national investment
Y = money gross national product
$\triangle Y$ = annual change in gross national product

These propensities to save can be separated into private and public components. The average public propensity to save was found as the ratio between the surplus of tax receipts over current expenditures and gross national product; the marginal public propensity to save was found as the ratio between changes in these quantities. The average and marginal private components were found as the difference between the overall propensities to save and the public component. In this way, the average public propensity to save was estimated at .025, and the marginal public propensity to save at .039. Similarly, the average private propensity to save was estimated at .089, and the marginal private propensity to save at .154.

3. **Propensity to tax.** On the basis of data for the years 1946-1950, the average propensity to tax was estimated at .090, and the marginal propensity to tax at .137, using the following formulas:

$$ta = \frac{T}{Y} \text{ and } tm = \frac{\triangle T}{\triangle Y}$$

where:

ta = average propensity to tax
tm = marginal propensity to tax
T = Federal, state and municipal tax receipts
$\triangle T$ = annual change in Federal, state and municipal tax receipts
Y = money gross national product
$\triangle Y$ = annual change in money gross national product

4. **Propensity to consume domestic goods and services.** The marginal propensity to consume domestic goods and services was computed as follows:

d = 1-bm-sm (private)-tm, where
d = marginal propensity to consume domestic goods and services

bm = marginal propensity to import consumption goods

sm (private) = the private component of the marginal propensity to save

tm = marginal propensity to tax

d = 1–.114–.154–.137 = .595

5. **Multiplier.** The multiplier (k) was determined in the following manner:

$$k = \frac{1}{1-d} = \frac{1}{1-.595} = 2.469$$

6. **Expansion of income from domestic investment outlays.** In order to estimate the expansion of income resulting from an increase in domestic investment outlays, this increase (58.2% of the total increase) was multiplied by the multiplier (2.469). This gave an income expansion factor for increases in investment outlays of 1.437. The imports of consumption goods created indirectly by the increase in investment outlays through its effect on income were then found by multiplying the expansion factor (1.437) by the marginal propensity to import consumption goods (.114), which gave .164.

III. *Direct and indirect effects*

The combined direct and indirect effects of an increase in investment expenditures on imports was estimated consequently at 58.2% of the increase.

Appendix E

HYPOTHETICAL BALANCE OF PAYMENTS FOR MEXICO IN 1956

The hypothetical balance of payments for 1956 is based upon the following assumptions regarding the development of gross domestic product, gross national product, gross domestic investment and imports:

(1) that the average annual increase in real gross domestic product will be 6%, the same as the average annual increase in 1946-1950.

(2) that the relation between net income transferred abroad to gross domestic product remains unchanged, i.e., that real gross national product also increases by an average of 6% annually.

(3) that the ratio between gross domestic investment and gross national product will not change from 14.0%, the average level for the years 1947 to 1950. This assumption implies that savings (gross domestic investment—balance of payments deficit on current account) will be 13.1% of gross national product as compared with a ratio of 15.0% in 1950 and with a marginal propensity to save of .193, computed as an average for the period 1942 to 1950. This high marginal propensity to save, principally found in the years 1947 to 1950, is due to a considerable extent to the generation of forced savings through inflation, to changes in income distribution during the war years, the immediate effects of devaluation, postwar import restrictions, and great and sudden price increases of export goods, especially in 1950. For these reasons, it cannot be assumed that the rapid upward movement of savings will continue in the next five years, especially since the increase in 1947-1950 placed a considerable strain upon the standard of living of the Mexican people. On the basis of the assumption used in these calculations, the ratio of savings to gross national product (13.1%) will in 1956 be approximately similar to the average for 1947-1950 (13.2%).

(4) that the imports of capital goods in relation to investment will remain at the average level for 1946-1950 (31.9%).

(5) that the 1946-1950 marginal propensity to import consumption goods (.114) will decline to .100. This assumption is based upon the consideration that, as economic development advances in Mexico, domestically-produced goods will increasingly be substituted for imported consumption goods.

The tentative balance of payments for Mexico in 1956 was constructed on the basis of these assumptions, as well as on the estimates for exports, foreign travel and other current accounts items.

The following table shows the magnitudes assumed for gross domestic product, gross national product and gross domestic investment and the imports, balance of payments deficit on current account and gross national investment (gross domestic investment + balance of payments surplus) derived as a result of these assumptions:

	Billions of Pesos
Gross domestic product	61.42
Gross national product	61.05
Imports	7.59
Balance of payments surplus on current account	—.55

	Billions of Pesos
Gross domestic investment	8.55
% of gross national product	14.0
Gross national investment	8.00
% of gross national product	13.1

The procedure followed in these estimates necessarily implies a balance between domestic demand for consumption goods on the one hand, and production of consumption goods for the domestic market and imports of consumption goods on the other.

	Billions of Pesos
Gross domestic product	61.42
— Production of capital goods for the domestic market (68.1% of gross domestic investment)	5.82
— Production for exports (exports and foreign travel receipts)	8.28
Production for domestic consumption	47.32
+ Imports of consumption goods and foreign travel payments	4.95
Supply of Consumption Goods and Services	*52.27*
Gross domestic product	61.42
— Gross national investment	8.00
— Net income transfers abroad (interest on official debt + direct investment service — personal remittances)[1]	1.15
Demand for Consumption Goods and Services	*52.27*

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[1] The net income transfers abroad as shown here are not equal to the difference between gross domestic product and gross national product because the concept of income transfers used in the table on National Income and Product, 1939–1950 (Table 1), on which the estimates of gross domestic product and gross national product were based, is not the same as the concept used here, which corresponds to income transfers as defined in the table on Mexico's Balance of Payments, 1939–1950 (Table 122).

Tables

TABLE 1

National Product and Income, 1939-1950[1]

(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
GROSS DOMESTIC PRODUCT	*6,743.8*	*7,257.4*	*8,608.2*	*10,627.8*	*13,313.2*	*17,317.1*	*20,599.9*	*27,316.2*	*30,032.4*	*32,601.1*	*35,713.9*	*43,299.0*
Net income transferred abroad[2]	—86.7	—134.8	—161.2	—137.5	22.5	80.2	79.1	—52.8	—223.5	—212.5	—184.1	—260.9
GROSS NATIONAL PRODUCT	*6,657.1*	*7,122.6*	*8,447.0*	*10,490.3*	*13,290.7*	*17,397.3*	*20,679.0*	*27,263.4*	*29,808.9*	*32,388.6*	*35,529.8*	*43,038.1*
—Indirect taxes	—516.8	—489.9	—566.4	—600.2	—702.4	—842.8	—941.0	—1,245.5	—1,425.9	—1,639.2	—1,850.7	—2,251.1
+Subsidies	1.6	0.2	1.4	2.9	1.1	35.4	20.2	11.9	8.5	107.4	84.1	60.0
—Depreciation[3]	—404.6	—426.0	—516.5	—637.7	—798.8	—1,039.0	—1,236.0	—1,912.1	—2,102.3	—2,282.1	—2,500.0	—3,030.9
NATIONAL INCOME AT FACTOR COST	*5,737.3*	*6,206.9*	*7,365.5*	*9,255.3*	*11,790.6*	*15,550.9*	*18,522.2*	*24,117.7*	*26,289.2*	*28,574.7*	*31,263.2*	*37,816.1*

Sources: Bank of Mexico and Combined Mexican Working Party.

[1] See explanatory notes in table 2.

[2] Net income transferred abroad as shown in this table does not altogether conform with the data in table 122 where different sources and different concepts were sometimes employed.

[3] Depreciation has been estimated at 6% of gross domestic product in 1939-1945, and 7% in 1946-1950.

TABLE 2

Net Domestic Product at Factor Cost, By Activities and By Factors, 1939-1950[1]

(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
NET DOMESTIC PRODUCT AT FACTOR COST[2]	**5,824.0**	**6,341.7**	**7,526.7**	**9,392.8**	**11,813.1**	**15,470.7**	**18,443.1**	**24,170.5**	**26,512.7**	**28,787.2**	**31,447.3**	**38,077.0**
Agriculture[3]	*775.2*	*844.1*	*1,001.8*	*1,250.2*	*1,572.3*	*2,059.2*	*2,279.2*	*2,757.0*	*3,176.8*	*3,614.8*	*4,129.5*	*5,387.4*
Mixed income	775.2	844.1	1,001.8	1,250.2	1,572.3	2,059.2	2,279.2	2,757.0	3,176.8	3,614.8	4,129.5	5,387.4
Livestock[3]	*340.6*	*370.4*	*439.1*	*547.3*	*686.6*	*899.2*	*1,001.1*	*1,219.2*	*1,321.9*	*1,418.6*	*1,530.9*	*1,797.4*
Mixed income	340.6	370.4	439.1	547.3	686.6	899.2	1,001.1	1,219.2	1,321.9	1,418.6	1,530.9	1,797.4
Forestry[3]	*51.0*	*53.8*	*61.6*	*74.4*	*90.3*	*113.7*	*132.2*	*168.8*	*160.1*	*146.8*	*130.6*	*153.1*
Mixed income	51.0	53.8	61.6	74.4	90.3	113.7	132.2	168.8	160.1	146.8	130.6	153.1
Fisheries[3]	*17.4*	*19.6*	*23.7*	*30.2*	*39.0*	*52.2*	*61.6*	*80.0*	*94.9*	*110.8*	*130.0*	*152.4*
Mixed income	17.4	19.6	23.7	30.2	39.0	52.2	61.6	80.0	94.9	110.8	130.0	152.4
Mining	*278.6*	*273.0*	*288.0*	*314.4*	*338.8*	*369.5*	*392.3*	*451.3*	*595.7*	*756.2*	*945.9*	*1,114.1*
Wages, salaries and supplements	155.0	152.5	161.6	177.5	192.9	213.0	224.5	255.5	298.5	344.0	397.7	468.4
Profits	77.3	73.9	75.7	79.3	80.7	80.7	86.9	102.1	184.3	278.7	390.2	459.6
Mixed income	9.5	9.3	9.6	10.3	10.9	11.4	10.8	10.9	12.5	14.1	16.1	19.0
+Adjustment for addition of metals production tax to profits[4]	36.8	37.3	41.1	47.3	54.3	64.4	70.1	82.8	100.4	119.4	141.9	167.1
Petroleum[5]	*104.3*	*107.4*	*120.2*	*140.9*	*165.7*	*202.6*	*243.4*	*321.4*	*382.8*	*448.8*	*525.7*	*598.3*
Wages, salaries and supplements	103.0	103.1	111.6	125.9	141.4	163.1	194.6	255.4	289.0	323.3	363.7	414.0
Profits	0.3	3.2	7.2	13.1	21.9	36.0	45.0	61.4	89.3	121.2	158.3	180.1
Mixed income	1.0	1.1	1.4	1.9	2.4	3.5	3.8	4.6	4.5	4.3	3.7	4.2
Electric power	*40.7*	*41.0*	*44.8*	*51.0*	*58.0*	*67.9*	*77.8*	*97.7*	*119.8*	*143.9*	*172.6*	*179.8*
Wages, salaries and supplements	26.6	27.0	29.7	34.2	39.3	47.0	54.0	68.1	84.0	101.3	122.0	127.1
Profits	14.1	14.0	15.1	16.8	18.7	20.9	23.8	29.6	35.8	42.6	50.6	52.7
Building and construction[6]	*99.9*	*112.7*	*138.3*	*178.6*	*231.9*	*313.5*	*377.3*	*499.2*	*532.1*	*561.1*	*594.4*	*688.5*
Wages, salaries and supplements	73.9	83.3	102.1	131.6	170.7	230.4	274.8	360.1	383.1	403.0	426.4	493.9
Profits	26.0	29.4	36.2	47.0	61.2	83.1	102.5	139.1	149.0	158.1	168.0	194.6
Manufacturing	*914.1*	*1,027.3*	*1,257.1*	*1,616.2*	*2,092.8*	*2,818.2*	*3,437.2*	*4,605.8*	*4,906.4*	*5,168.7*	*5,473.6*	*6,964.9*
Wages, salaries and supplements	402.9	429.1	497.8	606.9	745.4	952.3	1,100.5	1,396.2	1,565.0	1,735.3	1,935.1	2,462.4
Profits	381.2	462.7	605.6	826.4	1,128.0	1,593.4	2,021.9	2,810.3	2,890.0	2,928.5	2,970.9	3,780.3
Mixed income	75.6	77.1	85.4	99.0	115.1	138.0	157.0	195.9	218.9	242.4	269.6	343.6
Imputed earnings of self-employed	54.4	58.4	68.3	83.9	104.3	134.5	157.8	203.4	232.5	262.5	298.0	379.2
Commerce	*1,380.6*	*1,571.7*	*1,946.5*	*2,530.2*	*3,309.7*	*4,500.6*	*5,722.3*	*7,967.1*	*8,637.3*	*9,267.8*	*10,003.4*	*11,782.4*
Wages, salaries and supplements	167.7	180.3	211.3	260.2	323.1	417.1	450.3	528.6	604.5	683.1	775.6	913.5
Profits	812.0	978.5	1,273.2	1,728.6	2,349.6	3,307.0	4,461.8	6,528.0	7,023.2	7,476.3	8,004.0	9,427.4
Mixed income[7]	119.4	123.2	138.2	162.4	191.6	234.5	244.0	273.2	302.8	332.2	367.0	432.3
Imputed earnings of self-employed	281.5	289.7	323.8	379.0	445.4	542.0	566.2	637.3	706.8	776.2	856.8	1,009.2
Banking, insurance and other financial institutions	*74.3*	*80.9*	*95.9*	*119.5*	*150.1*	*196.3*	*296.7*	*471.2*	*477.5*	*475.6*	*472.7*	*556.8*
Wages, salaries and supplements	45.4	48.7	57.0	70.1	86.8	111.7	138.9	189.4	224.6	262.0	306.1	360.5
Profits	28.9	32.2	38.8	49.4	63.3	84.6	157.8	281.8	252.9	213.6	166.6	196.3
Transportation and communications	*340.0*	*361.6*	*418.9*	*510.0*	*625.4*	*797.9*	*900.0*	*1,112.7*	*1,172.7*	*1,221.4*	*1,276.8*	*1,622.2*
Wages, salaries and supplements	205.6	210.5	233.9	272.1	317.3	382.8	462.0	613.3	660.4	703.8	753.9	957.8
Profits	44.7	49.3	59.3	75.0	95.5	126.9	134.1	153.3	159.9	164.4	169.9	215.9
Mixed income	37.6	42.4	51.9	66.9	86.7	116.9	119.9	131.5	131.0	128.1	124.2	157.8
Imputed earnings of self-employed	52.1	59.4	73.8	96.0	125.9	171.3	184.0	214.6	221.4	225.1	228.8	290.7
Private and professional services[8]	*485.3*	*525.6*	*621.0*	*771.1*	*965.0*	*1,257.0*	*1,478.3*	*1,910.9*	*2,070.9*	*2,221.2*	*2,396.7*	*2,822.9*
Wages, salaries and supplements	147.2	161.5	193.3	243.1	308.1	406.2	451.1	547.4	608.2	668.7	739.8	871.4
Profits	108.1	128.2	164.5	220.8	297.2	414.6	547.2	786.8	836.5	879.4	929.5	1,094.8
Mixed income	180.0	183.5	203.1	235.1	272.5	326.5	360.6	435.3	465.0	491.4	521.3	614.0
Imputed earnings of self-employed	50.0	52.4	60.1	72.1	87.2	109.7	119.4	141.4	161.2	181.7	206.1	242.7
Government services[9]	*436.0*	*439.4*	*479.5*	*545.8*	*620.5*	*726.1*	*782.6*	*916.7*	*1,106.5*	*1,310.7*	*1,551.7*	*1,945.1*
Wages, salaries and supplements	436.0	439.4	479.5	545.8	620.5	726.1	782.6	916.7	1,106.5	1,310.7	1,551.7	1,945.1
Services of other institutions[10]	*6.1*	*6.0*	*6.5*	*7.3*	*8.2*	*9.2*	*10.1*	*11.3*	*14.3*	*17.6*	*21.6*	*25.5*
Wages, salaries and supplements	6.1	6.0	6.5	7.3	8.2	9.2	10.1	11.3	14.3	17.6	21.6	25.5
Rent[11]	*398.9*	*416.4*	*472.9*	*563.6*	*675.2*	*841.0*	*953.5*	*1,185.4*	*1,304.7*	*1,421.6*	*1,558.3*	*1,658.5*
Interest[12]	*85.2*	*93.5*	*111.9*	*140.7*	*178.4*	*235.3*	*280.0*	*366.1*	*416.8*	*468.9*	*530.6*	*624.9*
Other items	*15.0*	*15.8*	*18.1*	*21.7*	*26.2*	*33.0*	*40.2*	*54.2*	*60.7*	*67.4*	*75.5*	*88.9*
Mixed income	15.0	15.8	18.1	21.7	26.2	33.0	40.2	54.2	60.7	67.4	75.5	88.9
Adjustment for indirect taxes not deducted[13]	*—19.2*	*—18.5*	*—19.1*	*—20.3*	*—21.0*	*—21.7*	*—22.7*	*—25.5*	*—39.2*	*—54.7*	*—73.1*	*—86.1*
Less: Net income transferred abroad[14]	—86.7	—134.8	—161.2	—137.5	—22.5	80.2	79.1	—52.8	—223.5	—212.5	—184.1	—260.9
Net national product (income) at factor cost[15]	**5,737.3**	**6,206.9**	**7,365.5**	**9,255.3**	**11,790.6**	**15,550.9**	**18,522.2**	**24,117.7**	**26,289.2**	**28,574.7**	**31,263.3**	**37,816.1**

Sources: Bank of Mexico and Combined Mexican Working Party.

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[1] Data for 1939, 1944, 1946 and 1949 furnished by the Bank of Mexico. Estimates for intermediary years interpolated by the Combined Mexican Working Party. The figure for 1950 was estimated on the basis of the index of real net product calculated by the Working Party, on the assumption of a rise in prices over 1949 as shown by the 210 commodity wholesale price index of the Bank of Mexico. The scope of factor income in each case includes the following, according to the Bank of Mexico:

Wages, salaries and supplements: Income earned, excluding deductions. The cost of foodstuffs, clothes, housing, travel allowances and other services granted by employers to wage or salary earners has been added. Social services or wage supplements include employers' and government contributions to the social security and pension funds, as well as the value of medical service and medicines, sports articles and other compensations which are generally specified in collective labor contracts.

Profits: Income of capital including dividends, and undistributed profits accruing to owners of capital used in domestic production, who reside in the country permanently.

Mixed income: Income from labor and capital not separable statistically; includes farmers, artisans, small scale merchants and, in general, all self-employed individuals not employing others.

Imputed earnings of self-employed: Withdrawals by owners of enterprises. Includes partly income from labor and partly income from capital.

Rent: See footnote 11.

Interest: See footnote 12.

[2] Value of the net product produced in Mexican territory; includes income transferred abroad which is to be deducted in order to obtain the national income, as shown in the last item of this table (see also footnote 14).

[3] The Bank of Mexico has made a global estimate of depreciation, use of raw materials and other items, which are deducted from gross value of production for agriculture, livestock, forestry and fisheries in order to arrive at an aggregate of the net product for the four sectors. The Combined Mexican Working Party has estimated the net product for each sector on the assumption that the ratio between net product and gross value of production is the same for each of them.

[4] This item was excluded by the Bank of Mexico. It was added by the Working Party because it is really a direct tax on profits.

[5] Includes private transportation in the petroleum industry and retail distribution of petroleum and its products.

[6] Includes some income generated in public construction by private contractors.

[7] Includes a small amount of private services.

[8] A small amount of private services is included in commerce.

[9] Includes income generated in public construction carried out directly by the Government (see footnote 6); also includes income paid from abroad for the foot-and-mouth disease campaign.

[10] Largely autonomous public agencies not included in other items.

[11] Includes payments of rent and imputed rent.

[12] Includes net payments by Government and enterprises to private persons and payments abroad. In the case of the Government, only public debt incurred for productive purposes is included.

[13] Adjustment by Working Party of Bank of Mexico data.

[14] The Working Party considered dividends, interest and royalties of non-resident capital, plus net film royalties, as income transferred abroad; and remittances of migrant workers as income transferred from abroad to Mexico.

[15] Net domestic product at factor cost, less net income transferred abroad, equals net national product (income) at factor cost.

TABLE 3

NET DOMESTIC PRODUCT AT FACTOR COST BY ACTIVITIES AND BY FACTORS, 1939-1950

(Percentages)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
NET DOMESTIC PRODUCT AT FACTOR COST	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Agriculture	*13.3*	*13.3*	*13.3*	*13.3*	*13.3*	*13.3*	*12.4*	*11.4*	*12.0*	*12.6*	*13.1*	*14.1*
Mixed income	13.3	13.3	13.3	13.3	13.3	13.3	12.4	11.4	12.0	12.6	13.1	14.1
Livestock	*5.8*	*5.8*	*5.8*	*5.8*	*5.8*	*5.8*	*5.4*	*5.0*	*5.0*	*4.9*	*4.9*	*4.7*
Mixed income	5.8	5.8	5.8	5.8	5.8	5.8	5.4	5.0	5.0	4.9	4.9	4.7
Forestry	*0.9*	*0.9*	*0.8*	*0.8*	*0.8*	*0.7*	*0.7*	*0.7*	*0.6*	*0.5*	*0.4*	*0.4*
Mixed income	0.9	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.5	0.4	0.4
Fisheries	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.4*	*0.4*	*0.4*	*0.4*
Mixed income	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4
Mining	*4.8*	*4.3*	*3.8*	*3.3*	*2.9*	*2.4*	*2.1*	*1.9*	*2.2*	*2.6*	*3.0*	*2.9*
Wages, salaries and supplements	2.7	2.4	2.2	1.9	1.6	1.4	1.2	1.1	1.1	1.2	1.3	1.2
Profits	1.3	1.2	1.0	0.8	0.7	0.5	0.4	0.4	0.7	0.9	1.2	1.2
Mixed income	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
+Adjustment of profits for metals production tax	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.4	0.4	0.4
Petroleum	*1.8*	*1.7*	*1.6*	*1.5*	*1.4*	*1.3*	*1.3*	*1.3*	*1.4*	*1.6*	*1.7*	*1.6*
Wages, salaries and supplements	1.8	1.6	1.5	1.3	1.2	1.1	1.1	1.1	1.1	1.2	1.2	1.1
Profits	*	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.5
Mixed income	*	*	*	*	*	*	*	*	*	*	*	*
Electric power	*0.7*	*0.6*	*0.6*	*0.6*	*0.5*	*0.5*	*0.4*	*0.4*	*0.5*	*0.5*	*0.5*	*0.5*
Wages, salaries and supplements	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3
Profits	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2
Building and construction	*1.7*	*1.8*	*1.8*	*1.9*	*2.0*	*2.0*	*2.0*	*2.1*	*2.0*	*1.9*	*1.9*	*1.8*
Wages, salaries and supplements	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.3
Profits	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5
Manufacturing	*15.7*	*16.2*	*16.7*	*17.2*	*17.7*	*18.2*	*18.7*	*19.1*	*18.5*	*17.9*	*17.4*	*18.3*
Wages, salaries and supplements	6.9	6.8	6.6	6.5	6.3	6.1	6.0	5.8	5.9	6.0	6.2	6.5

Profits	6.6	7.3	8.1	8.8	9.5	10.3	11.0	11.6	10.9	10.2	9.4	9.9
Mixed income	1.3	1.2	1.1	1.0	1.0	0.9	0.8	0.8	0.8	0.8	0.9	0.9
Imputed earnings of self-employed	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0
Commerce	*23.7*	*24.8*	*25.9*	*26.9*	*28.0*	*29.1*	*31.0*	*33.0*	*32.5*	*32.2*	*31.8*	*30.9*
Wages, salaries and supplements	2.9	2.9	2.8	2.8	2.7	2.7	2.4	2.2	2.3	2.4	2.5	2.4
Profits	13.9	15.4	16.9	18.4	19.9	21.4	24.2	27.0	26.5	25.9	25.4	24.7
Mixed income	2.1	1.9	1.9	1.7	1.6	1.5	1.3	1.1	1.1	1.2	1.2	1.1
Imputed earnings of self-employed	4.8	4.6	4.3	4.0	3.8	3.5	3.1	2.7	2.6	2.7	2.7	2.7
Banking, insurance and other financial institutions	*1.3*	*1.3*	*1.3*	*1.3*	*1.3*	*1.3*	*1.6*	*1.9*	*1.8*	*1.7*	*1.5*	*1.5*
Wages, salaries and supplements	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.9	1.0	1.0
Profits	0.5	0.5	0.5	0.5	0.5	0.6	0.8	1.1	1.0	0.8	0.5	0.5
Transportation and communications	*5.8*	*5.7*	*5.6*	*5.5*	*5.3*	*5.2*	*4.9*	*4.6*	*4.4*	*4.2*	*4.1*	*4.3*
Wages, salaries and supplements	3.5	3.3	3.1	2.9	2.7	2.5	2.5	2.5	2.5	2.4	2.4	2.5
Profits	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.6
Mixed income	0.6	0.7	0.7	0.7	0.7	0.8	0.7	0.6	0.5	0.4	0.4	0.4
Imputed earnings of self-employed	0.9	0.9	1.0	1.1	1.1	1.1	1.0	0.9	0.8	0.8	0.7	0.8
Private and professional services	*8.3*	*8.3*	*8.3*	*8.2*	*8.2*	*8.1*	*8.0*	*7.9*	*7.8*	*7.7*	*7.6*	*7.4*
Wages, salaries and supplements	2.5	2.6	2.6	2.6	2.6	2.6	2.4	2.3	2.3	2.3	2.3	2.3
Profits	1.9	2.0	2.2	2.3	2.5	2.7	3.0	3.2	3.2	3.1	2.9	2.9
Mixed income	3.1	2.9	2.7	2.5	2.3	2.1	2.0	1.8	1.7	1.7	1.7	1.6
Imputed earnings of self-employed	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.7	0.6
Government services	*7.5*	*6.9*	*6.4*	*5.8*	*5.2*	*4.7*	*4.3*	*3.8*	*4.2*	*4.6*	*4.9*	*5.1*
Wages, salaries and supplements	7.5	6.9	6.4	5.8	5.2	4.7	4.3	3.8	4.2	4.6	4.9	5.1
Services of public institutions	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*
Wages, salaries and supplements	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Rent	*6.8*	*6.6*	*6.3*	*6.0*	*5.7*	*5.4*	*5.2*	*4.9*	*4.9*	*4.9*	*5.0*	*4.4*
Interest	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.6*	*1.6*	*1.7*	*1.6*
Other items	*0.3*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
Mixed income	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Adjustment for indirect taxes not deducted	*—0.3*	*—0.3*	*—0.3*	*—0.2*	*—0.2*	*—0.1*	*—0.1*	*—0.1*	*—0.1*	*—0.1*	*—0.2*	*—0.2*

Source: Table 2.

*Less than 0.05%.

TABLE 5

Indices of Real Net Product and its Components
(1939 = 100)

	Weights[1]	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
Real net domestic product at factor cost	*100.00*	*100.0*	*101.6*	*114.8*	*130.7*	*136.3*	*148.7*	*160.9*	*172.5*	*175.6*	*184.5*	*193.4*	*214.4*
Annual increase %		—	1.6	13.0	13.8	4.3	9.1	8.2	7.3	1.8	5.0	4.9	10.8
Agriculture[2]	13.01	100.0	91.7	107.8	123.6	113.1	123.8	120.0	124.3	135.8	151.5	158.3	183.8
Annual increase %		—	—8.3	17.6	14.7	—8.5	9.5	—3.1	3.6	9.3	11.6	4.5	16.1
Livestock[3]	4.82	100.0	106.4	109.8	115.2	114.3	111.5	104.2	114.3	124.0	124.4	125.9	137.5
Annual increase %		—	6.4	3.2	4.9	—0.8	—2.4	—6.6	9.7	8.5	0.3	1.2	9.2
Forestry[4]	0.41	100.0	100.0	100.0	79.4	105.3	83.6	75.3	93.5	94.8	89.4	99.4	99.4
Annual increase %		—	—	—	—20.6	32.6	—20.6	—9.9	24.2	1.4	—5.7	11.2	—
Fisheries[5]	0.41	100.0	100.0	108.0	118.0	138.0	166.0	218.0	229.0	228.0	286.0	304.0	304.0
Annual increase %		—	—	8.0	9.3	17.0	20.3	31.3	5.1	—0.4	25.4	6.3	—
Mining[6]	2.98	100.0	95.2	96.8	115.3	111.0	98.9	100.6	75.9	99.0	90.1	89.4	97.8
Annual increase %		—	—4.8	1.7	19.1	—3.7	—10.9	1.7	—24.5	30.4	—9.0	—0.8	9.4
Petroleum[7]	1.66	100.0	96.8	103.8	91.9	94.9	102.2	114.0	128.0	143.7	147.7	159.6	171.2
Annual increase %		—	—3.2	7.2	—11.5	3.3	7.7	11.6	12.3	12.3	2.8	8.1	7.3
Electric power[8]	0.54	100.0	102.4	102.5	106.6	111.2	111.7	124.6	134.7	146.2	161.2	175.8	179.7
Annual increase %		—	2.4	0.1	4.0	4.3	0.5	11.6	8.1	8.5	10.3	9.1	2.2
Building and construction[9]	1.87	100.0	94.2	104.8	121.6	137.6	155.8	173.2	176.5	181.6	170.6	159.9	154.8
Annual increase %		—	—5.8	11.3	16.0	13.2	13.2	11.2	1.9	2.9	—6.1	—6.3	—3.2
Manufacturing[10]	18.16	100.0	105.1	121.2	138.3	145.8	157.0	171.2	174.6	169.7	183.2	199.4	228.2
Annual increase %		—	5.1	15.3	14.1	5.4	7.7	9.0	2.0	—2.8	8.0	8.8	14.4
Transportation and communications[11]	4.02	100.0	100.9	103.9	116.8	135.4	145.5	144.0	158.3	159.6	155.7	180.3	206.1
Annual increase %		—	0.9	3.0	12.4	15.9	7.5	—1.0	9.9	0.8	—2.4	15.8	14.3
Government services[12]	4.89	100.0	95.6	102.8	112.4	122.1	143.0	143.6	140.8	144.9	168.5	163.3	185.1
Annual increase %		—	—4.4	7.5	9.3	8.6	17.1	0.4	—1.9	2.9	16.3	—3.1	13.4
Rent[13]	4.92	100.0	103.3	107.4	111.8	116.2	121.6	127.5	134.3	141.4	146.7	151.8	156.9
Annual increase %		—	3.3	4.0	4.1	3.9	4.7	4.9	5.3	5.3	3.8	3.5	3.4
Commerce and private services[14]	42.31	100.0	104.2	120.6	140.8	149.9	167.0	189.2	211.6	212.4	219.9	229.2	250.7
Annual increase %		—	4.2	15.8	16.8	6.4	11.4	13.2	11.9	0.4	3.5	4.2	9.4

Source: Combined Mexican Working Party, based on data from Bank of Mexico and other sources. For more detailed information see Appendix A "Estimate of Real Net Domestic Product, 1939-1950."

[1] The weights used for the computation of the index shown in this column represent percentages of the value of net domestic product at factor cost in 1949. After the calculations were completed, the Bank of Mexico corrected its 1949 estimate for manufactures. A corresponding change in the weights used in this table was not made because it would have affected the results of the calculations only to an insignificant degree.

[2] Index of the volume of agricultural production computed by the Bank of Mexico, Departamento de Estudios Economicos, Seccion de Ingreso Nacional.

[3] Volume index computed by the Combined Mexican Working Party on the basis of the value of net product in livestock and a price index composed of all cattle products in the 210 commodity wholesale price index of the Bank of Mexico.

[4] Volume index computed by Combined Mexican Working Party on the basis of estimates of volume and value of individual forestry products furnished by Bank of Mexico. The components of this index differ from those in the index in table 56. No data were available for 1939, 1940 and 1950. Figures for 1939 and 1940 have been assumed to be similar to that for 1941, and 1950 to that for 1949.

[5] Volume index computed by Combined Mexican Working Party (cf. table 57). No data were available for 1939 and 1950. The figure for 1939 was assumed to be similar to that for 1940, and the figure for 1950 to that for 1949.

[6] Volume index for mining calculated by the Bank of Mexico (cf. Annual Reports of the Bank of Mexico).

[7] Volume index computed by Combined Mexican Working Party. Includes production of refined petroleum and exports of crude petroleum, weighted according to the price relations of these products in each year.

[8] Index of electric power generated (cf. table 69).

[9] Volume index computed by Combined Mexican Working Party on the basis of the value of net product in building and construction and a cost of construction index for the Federal District calculated by the Bank of Mexico, Departamento de Estudios Economicos, Seccion de Ingreso Nacional.

[10] Volume index computed by the Bank of Mexico, Departamento de Estudios Economicos, Seccion de Ingreso Nacional.

[11] Volume index computed by Combined Mexican Working Party and including railroads, highway transportation, airlines, maritime transportation and communications.

[12] Volume index computed by Combined Mexican Working Party on the basis of net value of Government services and an index for average Government salaries. The latter index was calculated by the Combined Mexican Party on the basis of information from the Ministry of Finance and Public Credit on average salaries for main groups of employees.

[13] Index of floor space of buildings computed by the Combined Mexican Working Party, on the basis of information from the housing census of 1939 and from the Bank of Mexico.

[14] Besides commerce and private and professional services, includes credit institutions, services of public institutions, interest, other items and adjustments. Deflated by a special price index computed by The Combined Mexican Working Party.

TABLE 4

Net Domestic Product at Factor Cost, by Factors, 1939-1950

(Percentages)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
Net domestic product at factor cost	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Wages, salaries and supplements	30.5	29.1	27.9	26.5	25.0	23.7	22.6	21.5	22.0	22.9	23.7	23.8
Profits	26.2	28.6	30.7	33.0	35.3	37.6	41.3	45.1	44.3	42.9	41.5	41.4
Mixed income	27.9	27.3	26.9	26.4	26.1	25.7	23.9	22.0	22.4	22.8	23.3	23.9
Imputed earnings of self-employed	7.4	7.2	7.0	6.8	6.6	6.2	5.6	5.1	4.9	5.0	5.0	5.1
Rent and interest	8.3	8.1	7.8	7.5	7.2	6.9	6.7	6.4	6.5	6.5	6.7	6.0
Adjustment for indirect taxes not deducted	—0.3	—0.3	—0.3	—0.2	—0.2	—0.1	—0.1	—0.1	—0.1	—0.1	—0.2	—0.2

Source: Table 2.

TABLE 7

National Income

Indices of Per Capita Real Net Product

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
Real net domestic product at factor cost	100.0	101.6	114.8	130.7	136.3	148.7	160.9	172.5	175.6	184.5	193.4	214.4
Annual rate of increase (%)	—	1.6	13.0	13.8	4.3	9.1	8.2	7.3	1.8	5.0	4.9	10.8
Population	100.0	101.2	104.1	106.4	109.0	111.6	114.5	117.3	120.7	124.3	127.9	132.3
Annual rate of increase (%)	1.0	1.2	2.8	2.2	2.5	2.4	2.6	2.5	2.9	2.9	2.9	3.4
Per capita real net domestic product at factor cost	100.0	100.4	110.3	122.8	125.0	133.2	140.5	147.0	145.5	148.4	151.3	162.1
Annual rate of increase (%)	—	0.4	9.9	11.3	1.8	6.5	5.5	4.7	—1.1	2.0	1.9	7.1

Source: Tables 5 and 9.

Note: The annual average percentage increases by periods are as follows: Population: 1940-1945, 2.3%; 1946-1950, 2.9%; 1940-1950, 2.6%. Per capita real net domestic product at factor cost: 1940-1945, 5.9%; 1946-1950, 2.9% and 1940-1950, 4.5%.

TABLE 6

Average Annual Rates of Increase of Real Net Product by Activities

(Percentages)

	1940/45	1946/50	1940/50
Real net domestic product at factor cost	*8.2*	*5.9*	*7.2*
Agriculture	3.1	8.9	5.7
Livestock	0.7	5.7	2.9
Forestry	—4.6	5.7	0.0
Fisheries	13.9	6.9	10.6
Mining	0.1	—0.6	—0.2
Petroleum	2.2	8.5	5.0
Electric power	3.7	7.6	5.5
Building and construction	9.6	—2.2	4.1
Manufacturing	9.4	5.9	7.8
Transportation and communications	6.3	7.4	6.8
Government services	6.2	5.2	5.8
Rent	4.1	4.2	4.2
Commerce and private services	11.2	5.8	8.7

Source: Table 5.

TABLE 8

Population

Population According to Censuses

YEARS	POPULATION	INCREASE	
		Number	Percentage
1895	12,632,427		
1900	13,607,272	974,845	7.72
1910	15,160,369	1,553,097	11.41
1921	14,334,780	—825,589	—5.45
1930	16,552,722	2,217,942	15.47
1940	19,632,552	3,100,830	18.73
1950	25,715,350	6,061,798	30.84

Source: Dirección General de Estadística, population censuses.

TABLE 9

POPULATION

Annual Population Movements

Years	Estimated population[1]	Annual increase in per cent[2]	Years	Estimated population[1]	Annual increase in per cent[2]
1896	12,821,643	—	1929	16,295,918	1.77
1897	13,013,693	1.50	1930	16,588,522	1.80
1898	13,208,619	1.50	1931	16,875,976	1.73
1899	13,406,456	1.50	1932	17,169,635	1.74
1900	13,607,272	1.50	1933	17,469,659	1.75
1901	13,755,137	1.09	1934	17,776,212	1.75
1902	13,904,609	1.09	1935	18,089,465	1.76
1903	14,055,704	1.09	1936	18,409,596	1.77
1904	14,208,443	1.09	1937	18,736,786	1.78
1905	14,362,841	1.09	1938	19,071,222	1.78
1906	14,518,917	1.09	1939	19,413,095	1.79
1907	14,676,688	1.09	1940	19,762,603	1.80
1908	14,836,175	1.09	1941	20,208,163	2.25
1909	14,997,393	1.09	1942	20,656,807	2.22
1910	15,160,369	1.09	1943	21,164,788	2.46
1910–1921	[3]	[3]	1944	21,674,111	2.41
1922	14,444,434	—	1945	22,233,243	2.58
1923	14,692,554	1.72	1946	22,778,814	2.45
1924	14,945,233	1.72	1947	23,439,813	2.90
1925	15,203,787	1.73	1948	24,128,596	2.94
1926	15,467,979	1.74	1949	24,824,995	2.89
1927	15,737,956	1.75	1950	25,677,032	3.43
1928	16,011,879	1.74			

Source: Dirección General de Estadística.

[1] For the years 1896 to 1910 estimates are as of October 27 in each year; from 1922 to 1950 they are as of June 30 in each year.

[2] The average annual increase by periods is as follows: 1896-1900: 1.50; 1901-1910: 1.09; 1922-1930: 1.75; 1931-1940: 1.77 and 1941-1950: 2.65.

[3] No data available.

TABLE 10

POPULATION

Births and Birth Rate

Years	Births	Birth rate[2] (Live births per 1,000 inhabitants)	Years	Births	Birth rate[2] (Live births per 1,000 inhabitants)
1895	383,747	30.4	1928	517,064	32.3
1896	406,985	31.7	1929	634,897	39.3
1897	375,376	28.8	1930	819,814	49.4
1898	489,933	37.1	1931	738,399	43.8
1899	505,202	37.7	1932	743,150	43.3
1900	495,542	36.4	1933	737,020	42.2
1901	470,060	34.2	1934	787,314	44.3
1902	468,131	33.7	1935	764,326	42.3
1903	469,449	33.4	1936	791,725	43.0
1904	494,519	34.8	1937	826,307	44.1
1905	489,978	34.1	1938	829,651	43.5
1906	467,340	32.2	1939	865,081	44.6
1907	481,825	32.8	1940	875,471	44.3
1908	508,574	34.3	1941	878,935	43.5
1909	509,805	34.0	1942	940,067	45.5
1910	484,883	32.0	1943	963,317	45.5
1910-21[3]	—	—	1944	958,119	44.2
1922	453,643	31.4	1945	999,093	44.9
1923	470,723	32.0	1946	994,838	43.7
1924	459,894	30.8	1947	1,079,816	46.1
1925	503,531	33.1	1948	1,090,867	45.2
1926	483,339	31.2	1949[1]	1,123,358	45.3
1927	480,752	30.5	1950[1]	1,159,249	45.1

Source: Dirección General de Estadística.

[1] Preliminary data.

[2] The average annual birth rate by periods is as follows: 1895-1900: 33.7; 1901-1910: 33.5; 1922-1930: 34.4; 1931-1940: 43.5 and 1941-1950: 44.9.

[3] No data available.

TABLE 11

POPULATION

Deaths and Death Rate

Years	Deaths	Death rate[2] (Deaths per 1000 inhabitants)	Years	Deaths	Death rate[2] (Deaths per 1000 inhabitants)
1895	391,177	31.0	1928	404,599	25.3
1896	404,654	31.6	1929	437,303	26.8
1897	455,009	35.0	1930	441,717	26.6
1898	452,328	34.2	1931	437,038	25.9
1899	507,890	37.9	1932	447,532	26.1
1900	457,327	33.6	1933	449,149	25.7
1901	444,900	32.3	1934	422,595	23.8
1902	478,926	34.4	1935	408,471	22.6
1903	457,751	32.6	1936	432,763	23.5
1904	445,453	31.4	1937	456,540	24.4
1905	472,288	32.9	1938	436,476	22.9
1906	479,966	33.1	1939	446,216	23.0
1907	484,544	33.0	1940	458,906	23.2
1908	472,508	31.8	1941	446,361	22.1
1909	483,926	32.3	1942	471,600	22.8
1910	505,131	33.3	1943	474,950	22.4
1910-21[3]	—	—	1944	447,198	20.6
1922	364,832	25.3	1945	433,694	19.5
1923	358,574	24.4	1946	442,935	19.4
1924	383,129	25.6	1947	390,087	16.6
1925	402,690	26.5	1948	407,708	16.9
1926	384,850	24.9	1949[1]	438,970	17.7
1927	377,046	24.0	1950[1]	415,622	16.2

Source: Dirección General de Estadística.

[1] Preliminary data.

[2] The average annual death rate by periods is as follows: 1895-1900: 33.9; 1901-1910: 32.7; 1922-1930: 25.5; 1931-1940: 24.1; and 1941-1950: 19.4.

[3] No data available.

TABLE 12

GROSS INVESTMENT AND CONSUMPTION, 1939-1950

	1939	*1940*	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*	*1948*	*1949*	*1950*
Gross domestic investment[1] (millions of pesos)	**649**	**773**	**970**	**1005**	**1277**	**1730**	**2276**	**3261**	**4104**	**4552**	**5117**	**5937**
Savings *(gross national investment)*[2]	*819*	*833*	*696*	*1068*	*1511*	*1614*	*2117*	*2345*	*3190*	*4089*	*5138*	*6486*
Public savings[3]	254	216	269	321	545	705	578	1040	977	1242	1981	2301
Private savings[4]	565	617	427	747	966	909	1539	1305	2213	2847	3157	4185
Balance of payments deficit (+) or surplus (—) on current account (net foreign investment in Mexico)[5]	*—170*	*—60*	*274*	*—63*	*—234*	*116*	*159*	*916*	*914*	*463*	*—21*	*—549*
Net increase (+) or decrease (—) in foreign obligations	139	16	172	175	—59	—5	229	—103	109	64	—64	627
Net decrease (+) or increase (—) in monetary reserves	1	—131	6	—217	—681	—196	—390	591	711	350	—338	—1792
Statistical discrepancy[6]	—310	55	96	—21	506	317	320	428	94	49	381	616
Gross national product (millions of pesos)	*6657*	*7123*	*8447*	*10490*	*13291*	*17397*	*20679*	*27263*	*29809*	*32389*	*35530*	*43038*
Consumption[7]	5838	6290	7751	9422	11780	15783	18562	24918	26619	28300	30392	36552
Savings	819	833	696	1068	1511	1614	2117	2345	3190	4089	5138	6486
Ratios to gross national product (percentages)												
Gross domestic investment	*9.7*	*10.9*	*11.5*	*9.6*	*9.6*	*10.0*	*11.0*	*12.0*	*13.8*	*14.0*	*14.4*	*13.8*
Savings	12.3	11.7	8.2	10.2	11.4	9.3	10.2	8.6	10.7	12.6	14.5	15.1
Balance of payments deficit (+) or surplus (—)	—2.6	—0.8	3.3	—0.6	—1.8	0.7	0.8	3.4	3.1	1.4	—0.1	—1.3
Gross national product	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Consumption	87.7	88.3	91.8	89.8	88.6	90.7	89.8	91.4	89.3	87.4	85.5	84.9
Savings	12.3	11.7	8.2	10.2	11.4	9.3	10.2	8.6	10.7	12.6	14.5	15.1

Source: Combined Mexican Working Party.

[1] Table 14.

[2] Found by algebraic addition of the balance of payments deficit or surplus to the gross domestic investment.

[3] Found by adding the difference between total net receipts and current expenditures of the public sector to the earnings of Government agencies and enterprises used to finance their own investment (cf. tables 21, 115 and 116.)

[4] Found as the difference between total and public savings.

[5] Cf. table 122. Grants have been added to the current account surplus (deducted from the deficit).

[6] Balance of payments errors and omissions.

[7] Found by deducting savings from gross national product. Changes in inventories were not taken into account in the computation of gross domestic investment and are consequently included in consumption. Grants have been included in the current account of the balance of payments, but have not been added to the gross national product as income transferred to Mexico, hence consumption is estimated too low by the amount of the grants. This has not been corrected since the amount of the grants is negligible compared with consumption.

TABLE 13

PER CAPITA NATIONAL INCOME, INVESTMENT AND SAVINGS
International Comparisons

	Period	National[1] income per capita US dollars	Period	Ratio of gross domestic investment to gross national product %	Period	Ratio of savings (gross national investment) to gross national product %
Brazil	1949	200	1949	15.0	1949	14.0
Cuba	1949	310	1947/49	10.0	1947/49	13.6
Chile	1949	335	1947/49	11.1	1947/49	10.1
Colombia	1949	235	1947/50	15.8	1947/50	13.5
Guatemala	1947/48	130	1947/48	10.2	1947/48	11.0
Mexico	*1950*	*180*	*1947/50*	*14.0*	*1947/50*	*13.4*
Turkey	1948	130	1949	13.0	1949	11.0

Sources: International Bank for Reconstruction and Development and Combined Mexican Working Party.

[1] Net national product per capita.

TABLE 14

Gross Domestic Investment by Activities[1]
(Millions of Pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
GROSS DOMESTIC INVESTMENT	*649*	*773*	*970*	*1,005*	*1,277*	*1,730*	*2,276*	*3,261*	*4,104*	*4,552*	*5,117*	*5,937*
Agriculture[2]	*86*	*101*	*125*	*120*	*165*	*232*	*252*	*330*	*474*	*862*	*1,104*	*1,158*
Public	40	44	59	65	86	125	148	195	266	324	504	552
Private	46	57	66	55	79	107	104	135	208	538	600	606
Transportation and Communications[3]	*216*	*250*	*315*	*378*	*434*	*487*	*636*	*961*	*1,144*	*1,058*	*1,239*	*1,707*
Public	153	175	188	295	374	387	460	531	677	719	808	1,205
Private	63	75	127	83	60	100	176	430	467	339	431	502
Petroleum[4]												
Public	*14*	*34*	*24*	*24*	*26*	*41*	*108*	*105*	*79*	*133*	*193*	*287*
Construction[5]												
Private	*111*	*154*	*209*	*255*	*294*	*431*	*502*	*724*	*808*	*680*	*742*	*862*
Power[6]	*8*	*8*	*9*	*17*	*16*	*39*	*23*	*51*	*93*	*192*	*288*	*314*
Public	3	3	4	10	10	19	16	38	76	119	173	237
Private	5	5	5	7	6	20	7	13	17	73	115	77
Miscellaneous Public Investment[7]	*38*	*60*	*87*	*87*	*122*	*142*	*196*	*236*	*280*	*340*	*352*	*362*
Mining[8]												
Direct Foreign Investments	*5*	*6*	*15*	*4*	*12*	*20*	*11*	*15*	*9*	*8*	*35*	**42*
Manufacturing Industry[9]												
Machinery and equipment	*171*	*160*	*186*	*120*	*208*	*338*	*548*	*839*	*1,217*	*1,279*	*1,164*	*1,205*
Total public	248	316	362	481	618	714	928	1,105	1,378	1,635	2,030	2,643
Total private	401	457	608	524	659	1,016	1,348	2,156	2,726	2,917	3,087	3,294

Source: Combined Mexican Working Party.

*Estimated.

[1] Gross domestic investment was found by adding public investment (cf. table 18) to private investment as estimated by the Combined Mexican Working Party. Private investment was estimated as the sum of the value of capital goods domestically produced and imported (excluding building materials) and investments in construction, livestock and land clearing. Costs of transportation, sale and installation, as well as duties on imports, were included in the value of capital goods. Deductions were made for capital goods (other than building materials) already included in public investment. The estimate of construction investment was based on data from the Bank of Mexico, and that of livestock investment on corrected data from the Direccion de Ganaderia. For the estimate of investment in land clearing see table 29. Changes in inventories, for which no information could be obtained, are not included, in these estimates of gross domestic investment. The same applies to furniture and equipment in hotels, restaurants and commercial buildings.

[2] Includes investment in livestock. See table 21.

[3] Includes investments in the merchant fleet of Petroleos Mexicanos and in oil and gas pipelines. See table 90.

[4] Excludes investment in petroleum fleet, oil and gas pipelines. See table 64.

[5] Includes buildings for commercial and industrial purposes as well as residential construction.

[6] See table 71.

[7] The items included are "Social and Municipal Construction" and "Miscellaneous." See table 19.

[8] No material is available from which an estimate of total investments in mining could be made. The figures shown here represent foreign direct investment in mining, including capital movements and reinvested earnings, but excluding intercompany accounts. These figures are lower than total investment in mining for two reasons. They do not take investments of Mexican companies and individuals into account, and transfer of capital from foreigners to Mexicans appears as negative investment. It is only when the total of either capital movements or reinvested earnings has become negative, as happened in the years 1939 and 1945, that it has been possible to make a partial correction for the latter factor, by excluding the negative amount from the total. As all the big mining companies in Mexico are foreign-owned, it is likely, in spite of these qualifications, that the figures shown here represent the major part of investment in mining. The figure for 1950 is estimated on the basis of the assumptions that these investments represented the same percentage of total gross investment in 1950 as in 1949.

[9] This item has been found as the difference between total private investment and private investment in other fields. It represents a rough approximation of investments in machinery and equipment for manufacturing industry.

TABLE 15

Gross Domestic Investment by Activities
(Percentages)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
GROSS DOMESTIC INVESTMENT	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Agriculture	*13.3*	*13.1*	*12.9*	*12.0*	*12.9*	*13.4*	*11.1*	*10.1*	*11.5*	*18.9*	*21.6*	*19.5*
Public	6.2	5.7	6.1	6.5	6.7	7.2	6.5	6.0	6.5	7.1	9.9	9.3
Private	7.1	7.4	6.8	5.5	6.2	6.2	4.6	4.1	5.0	11.8	11.7	10.2
Transportation and communications	*33.3*	*32.3*	*32.5*	*37.6*	*34.0*	*28.1*	*27.9*	*29.5*	*27.9*	*23.2*	*24.2*	*28.8*
Public	23.6	22.6	19.4	29.4	29.3	22.3	20.2	16.3	16.5	15.8	15.8	20.3
Private	9.7	9.7	13.1	8.2	4.7	5.8	7.7	13.2	11.4	7.4	8.4	8.5
Petroleum												
Public	*2.1*	*4.4*	*2.5*	*2.4*	*2.0*	*2.4*	*4.7*	*3.2*	*1.9*	*2.9*	*3.8*	*4.8*
Construction												
Private	*17.1*	*19.9*	*21.5*	*25.4*	*23.0*	*24.9*	*22.1*	*22.2*	*19.7*	*14.9*	*14.5*	*14.5*
Power	*1.2*	*1.0*	*0.9*	*1.7*	*1.3*	*2.3*	*1.0*	*1.6*	*2.3*	*4.3*	*5.6*	*5.3*
Public	0.5	0.4	0.4	1.0	0.8	1.1	0.7	1.2	1.9	2.6	3.4	4.0
Private	0.7	0.6	0.5	0.7	0.5	1.2	0.3	0.4	0.4	1.7	2.6	1.3
Miscellaneous public investment	*5.9*	*7.8*	*9.0*	*8.6*	*9.6*	*8.2*	*8.6*	*7.2*	*6.8*	*7.5*	*6.9*	*6.1*
Mining												
Direct foreign investments	*0.8*	*0.8*	*1.5*	*0.4*	*0.9*	*1.2*	*0.5*	*0.5*	*0.2*	*0.2*	*0.7*	*0.7*
Manufacturing Industry												
Machinery and equipment	*26.3*	*20.7*	*19.2*	*11.9*	*16.3*	*19.5*	*24.1*	*25.7*	*29.7*	*28.1*	*22.7*	*20.3*
Total public	*38.3*	*40.9*	*37.3*	*47.9*	*48.4*	*41.3*	*40.8*	*33.9*	*33.6*	*35.9*	*39.7*	*44.5*
Total private	*61.7*	*59.1*	*62.7*	*52.1*	*51.6*	*58.7*	*59.2*	*66.1*	*66.4*	*64.1*	*60.3*	*55.5*

Source: Table 14.

TABLE 16

Gross Domestic Investment by Major Categories, 1939-1950
(millions of pesos)

	1939	*1940*	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*	*1948*	*1949*	*1950*	*1939 to 1950*
Gross Domestic Investment	**649**	**773**	**970**	**1005**	**1277**	**1730**	**2276**	**3261**	**4104**	**4552**	**5117**	**5937**	**31651**
Category I:	*280*	*313*	*396*	*266*	*360*	*578*	*908*	*1470*	*1922*	*2238*	*2379*	*2608*	*13716*
Agricultural machinery, small scale irrigation and land clearing	48	65	71	62	89	127	127	161	235	568	668	671	2892
Industrial equipment	171	160	186	120	208	338	548	839	1217	1279	1164	1205	7435
Petroleum	14	34	24	24	26	41	108	105	79	133	193	287	1068
Mining	5	6	15	4	12	20	11	15	9	8	35	42	182
Motor vehicles[1]	42	48	100	56	25	52	114	350	382	250	319	403	2139
Category II:	*251*	*292*	*346*	*454*	*590*	*685*	*818*	*1009*	*1272*	*1514*	*1903*	*2345*	*11481*
Large scale irrigation, eradication of foot-and-mouth disease	38	36	54	58	76	105	125	169	239	294	436	487	2117
Transportation and communications[2]	174	202	215	322	409	435	522	611	762	808	920	1304	6686
Electric power	8	8	9	17	16	39	23	51	93	192	288	314	1058
Community works[3]	31	46	68	57	89	106	148	178	178	220	259	240	1620
Category III:	*118*	*168*	*228*	*285*	*327*	*467*	*550*	*782*	*910*	*800*	*835*	*984*	*6454*
Residential, commercial and industrial construction[4]	111	154	209	255	294	431	502	724	808	680	742	862	5772
Public buildings[5]	7	14	19	30	33	36	48	58	102	120	93	122	682

Sources: Tables 14, 19, 29, 38 and 90.

[1] Trucks and buses.

[2] Excluding motor vehicles.

[3] Water supply, sewerage, markets, paving, public lighting and miscellaneous investments of municipalities and state governments.

[4] No breakdown of this item is available.

[5] Schools, hospitals, low cost housing, miscellaneous public buildings and defense construction.

TABLE 17

Gross Domestic Investment by Major Categories, 1939-1950
(Percentages)

	1939	*1940*	*1941*	*1942*	*1943*	*1944*	*1945*	*1946*	*1947*	*1948*	*1949*	*1950*	*1939 to 1950*
Gross Domestic Investment	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Category I:	*43.1*	*40.5*	*40.8*	*26.5*	*28.2*	*33.4*	*39.9*	*45.1*	*46.8*	*49.2*	*46.5*	*43.9*	*43.3*
Agricultural machinery, small scale irrigation and land clearing	7.4	8.4	7.3	6.2	7.0	7.3	5.6	5.0	5.7	12.5	13.1	11.3	9.1
Industrial equipment	26.3	20.7	19.2	11.9	16.3	19.5	24.1	25.7	29.7	28.1	22.7	20.3	23.4
Petroleum	2.1	4.4	2.5	2.4	2.0	2.4	4.7	3.2	1.9	2.9	3.8	4.8	3.4
Mining	0.8	0.8	1.5	0.4	0.9	1.2	0.5	0.5	0.2	0.2	0.7	0.7	0.6
Motor vehicles	6.5	6.2	10.3	5.6	2.0	3.0	5.0	10.7	9.3	5.5	6.2	6.8	6.8
Category II:	*38.7*	*37.8*	*35.6*	*45.1*	*46.2*	*39.6*	*35.9*	*30.9*	*31.0*	*33.2*	*37.2*	*39.5*	*36.3*
Large scale irrigation, eradication of foot-and-mouth disease	5.9	4.7	5.6	5.7	6.0	6.1	5.5	5.2	5.8	6.5	8.5	8.2	6.7
Transportation and communications	26.8	26.1	22.1	32.0	32.0	25.1	22.9	18.7	18.6	17.7	18.0	22.0	21.2
Electric power	1.2	1.0	0.9	1.7	1.2	2.3	1.0	1.6	2.3	4.2	5.6	5.3	3.3
Community works	4.8	6.0	7.0	5.7	7.0	6.1	6.5	5.4	4.3	4.8	5.1	4.0	5.1
Category III:	*18.2*	*21.7*	*23.6*	*28.4*	*25.6*	*27.0*	*24.2*	*24.0*	*22.2*	*17.6*	*16.3*	*16.6*	*20.4*
Residential, commercial and industrial construction	17.1	19.9	21.6	25.4	23.0	24.9	22.1	22.2	19.7	15.0	14.5	14.5	18.2
Public buildings	1.1	1.8	2.0	3.0	2.6	2.1	2.1	1.8	2.5	2.6	1.8	2.1	2.2

Source: Table 16.

TABLE 18

PUBLIC INVESTMENT, 1939-1951[1]

Principal Agencies of the Federal Government, Local Governments, Autonomous Public Agencies and State Enterprises

Gross investment, classified according to agencies and purposes

(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948[2]	1949[2]	1950[2]	1951[2]
TOTAL PUBLIC INVESTMENT	**247.7**	**316.0**	**361.7**	**480.9**	**617.5**	**713.7**	**928.4**	**1,105.4**	**1,378.3**	**1,616.4**	**2,026.0**	**2,646.6**	**3,007.5**
I *FEDERAL GOVERNMENT*[3]	**144.4**	**125.2**	**181.2**	**278.6**	**346.8**	**354.8**	**410.3**	**535.6**	**572.3**	**693.4**	**784.8**	**981.8**	**1,305.7**
1. *Ministry of Hydraulic Resources*[4]	38.1	36.3	56.7	63.0	83.0	117.1	139.6	189.0	228.3	249.3	260.7	371.9	502.1
Large scale irrigation	30.4	29.7	41.2	42.8	61.1	85.4	91.1	146.0	164.7	163.3	162.9	227.0	373.0
Small scale irrigation	—	—	2.9	5.2	7.4	12.0	14.3	20.0	14.6	15.4	18.9	19.6	
Other costs connected with irrigation expenditures	4.7	4.0	5.1	8.3	7.6	12.8	30.0	15.0	21.9	28.3	26.7	46.3	
Valle de México project	—	—	1.9	2.1	2.2	1.5	1.4	2.0	13.4	12.3	14.3	16.5	11.4
Papaloapan project	—	—	—	—	—	—	—	1.5	7.3	16.0	21.1	37.5	83.2
Tepalcatepec project	—	—	—	—	—	—	—	—	4.0	10.0	13.0	17.0	26.5
Maintenance and repairs	3.0	2.6	5.6	4.6	4.7	5.4	2.8	4.5	2.4	4.0	3.8	8.0	8.0
2. *Ministry of Agriculture and Livestock*[5]	1.4	7.9	1.9	1.7	2.7	4.7	3.7	3.6	5.3	9.9	3.7	8.8	10.6
Construction	1.1	1.1	1.1	1.2	1.5	2.3	2.3	2.3	3.3	3.7	1.4	1.5	3.1
Natural resources conservation	0.3	6.8	0.8	0.5	0.8	0.2	1.0	0.8	1.4	4.2	1.5	2.2	2.3
Agricultural development	—	—	—	—	0.4	2.2	0.4	0.5	0.6	2.0	0.8	5.1	5.2
3. *Ministry of Communications and Public Works*[6]	68.2	69.6	103.9	178.7	215.5	194.8	212.3	271.4	301.3	365.5	417.4	460.3	613.0
Highways	51.3	56.9	88.7	155.2	180.6	166.0	180.8	219.6	233.6	299.0	327.3	347.6	501.0
Railroads	16.2	11.9	14.6	22.0	33.1	26.9	30.0	50.0	60.4	52.4	55.7	82.6	74.4
Telecommunications	0.7	0.8	0.6	1.5	1.8	1.9	1.5	1.8	2.5	10.3	9.0	2.4	18.8
Airports	—	—	—	—	—	—	—	—	1.5	2.1	23.0	24.4	18.8
Miscellaneous (buildings)	—	—	—	—	—	—	—	—	3.3	1.7	2.4	3.3	—
4. *Ministry of the Navy*	2.6	4.8	5.0	10.9	17.3	15.2	15.8	15.2	14.5	24.7	37.1	81.5	44.2
Harbor works	1.2	3.7	4.0	8.8	12.4	11.9	12.7	12.5	8.9	18.9	25.3	69.3	44.2
Dredges and other expenses	—	—	—	1.5	3.9	1.7	1.6	0.3	3.2	3.8	9.5	9.9	—
Dredging	1.4	1.1	1.0	0.6	1.0	1.6	1.5	2.4	2.4	2.0	2.3	2.3	—
5. *Ministry of Health and Public Welfare*	2.9	3.6	8.8	9.7	9.8	13.2	22.0	44.0	17.6	35.2	57.7	48.0	117.4
Hospitals	2.9	3.6	6.5	7.3	6.8	7.1	7.7	6.3	10.7	11.5	6.5	6.8	5.9
Sanitation engineering[7]	*	*	2.3	2.4	3.0	6.1	14.3	37.7	6.9	23.7	51.2	41.2	111.5
6. *Ministry of Defense and Department of Military Industry*[8]	1.2	3.0	4.9	14.6	18.5	9.8	16.9	12.4	5.3	8.8	8.2	11.3	18.4
II *AUTONOMOUS PUBLIC AGENCIES AND STATE ENTERPRISES*[9]	**101.5**	**145.9**	**114.7**	**146.1**	**184.1**	**259.0**	**384.8**	**428.8**	**634.4**	**766.2**	**1,047.6**	**1,468.3**	**1,471.8**
7. *National Railways of Mexico*[10]	72.4	77.2	79.4	100.4	141.9	175.6	220.2	225.3	356.6	286.8	296.8	522.8	470.0
Track	6.4	6.4	6.5	10.4	0.4	28.9	24.0	27.1	39.7	43.8	42.7	112.7	200.0
Rolling stock	6.6	6.7	6.7	10.7	27.8	4.9	26.3	4.5	83.8	17.1	17.2	153.1	
Track maintenance	22.1	23.0	22.4	24.9	40.5	57.0	66.3	78.2	90.8	87.3	92.9	91.4	100.0
Maintenance of equipment	37.3	41.1	43.8	54.4	73.2	84.8	103.6	115.5	142.3	138.6	144.0	165.6	170.0
8. *Petróleos Mexicanos*	24.1	57.3	24.4	28.3	26.5	40.6	113.4	111.1	85.3	167.5	246.7	398.3	425.0
Petroleum industry													
9. *Federal Electricity Commission*	2.9	3.4	4.0	8.2	7.5	17.5	14.0	26.9	52.9	73.8	142.9	212.0	262.9
Electric power													
10. *New Electric Company of Chapala*	*	*	*	2.0	2.0	2.0	2.2	11.0	23.0	25.0	30.0	24.6	—
Electric power													
11. *Fertilizer and Guano Company*	—	—	—	—	—	1.4	2.4	2.3	1.0	0.3	40.6	30.7	6.3
Plant and industrial equipment													
12. *Anahuac Motors and Machinery Factory*	—	—	—	—	—	—	—	—	1.6	6.7	3.6	—	—
Plant and industrial equipment													
13. *Mexican Free Ports*	—	—	—	—	0.5	3.3	9.1	14.7	2.4	2.8	2.5	2.0	0.2
Harbor works	—	—	—	—	—	1.8	3.5	1.9	1.5	1.7	1.8	0.8	—
Dredges	—	—	—	—	—	0.1	0.4	0.6	0.5	0.4	0.6	1.2	0.2
Dredging	—	—	—	—	—	—	0.4	0.3	—	—	—	—	—
Water supply and sewerage	—	—	—	—	—	0.1	0.2	0.1	0.1	0.1	—	—	—
Schools	—	—	—	—	0.1	0.3	0.4	—	—	—	—	—	—
Paving	—	—	—	—	0.4	0.5	1.0	0.2	0.3	0.6	0.1	—	—
Electric power	—	—	—	—	—	0.3	—	0.3	—	—	—	—	—
Municipal building	—	—	—	—	—	0.2	0.2	—	—	—	—	—	—
Highways	—	—	—	—	—	—	3.0	11.3	—	—	—	—	—
14. *National Committee of farm-to-market roads*[11]	—	—	—	—	—	—	—	—	—	3.3	5.3	16.2	31.1
Highways													
15. *Southern Construction Company*	—	—	—	—	—	—	—	—	—	—	—	10.9	14.4
Highways													
16. *General Office for Civil and Retirement Pensions*[12]	—	1.5	1.8	1.9	1.3	1.4	2.1	8.2	13.4	19.8	7.6	14.2	22.2
Buildings	—	0.1	0.6	0.7	0.6	0.9	0.6	—	—	0.1	—	0.1	—
Hotel	—	1.4	1.2	1.2	0.7	0.5	1.5	8.2	9.8	5.8	0.9	0.2	—
Dwellings	—	—	—	—	—	—	—	—	3.6	13.9	6.7	13.9	21.1
Vacation camps	—	—	—	—	—	—	—	—	—	—	—	—	1.1
17. *Social Security Institute*	—	—	—	—	—	3.2	6.1	14.8	27.1	29.9	28.8	32.1	30.8
Hospitals, clinics, etc.	—	—	—	—	—	0.6	1.5	4.1	14.9	16.9	15.6	15.2	21.1
Buildings	—	—	—	—	—	—	1.2	2.1	3.7	5.2	10.5	16.6	2.2
Dwellings	—	—	—	—	—	—	—	—	—	—	—	—	1.7
Furniture and fixtures	—	—	—	—	—	2.6	3.4	4.4	5.5	5.2	3.3	5.2	5.8
Unclassified	—	—	—	—	—	—	—	4.2	3.0	2.6	—0.6	—4.9	—
18. *National Mortgage and Public Works Bank*[12]	—	—	—	—	—	—	—	—	5.2	6.6	10.0	19.5	10.3
Dwellings													
19. *Committee for the Federal School Construction Program*[13]	1.9	3.0	1.3	1.3	0.9	9.0	9.1	10.3	12.9	16.5	14.8	18.4	14.7
Schools and institutes													
20. *University City of Mexico*	—	—	—	—	—	—	—	—	—	—	—	11.0	87.0
Schools and administrative buildings	—	—	—	—	—	—	—	—	—	—	—	4.9	*
Sport fields	—	—	—	—	—	—	—	—	—	—	—	4.2	
Driveways, roads, bridges, etc.	—	—	—	—	—	—	—	—	—	—	—	1.2	
Water supply and sewerage	—	—	—	—	—	—	—	—	—	—	—	0.2	
Land development	—	—	—	—	—	—	—	—	—	—	—	0.1	
Tree nurseries and reforestation	—	—	—	—	—	—	—	—	—	—	—	0.4	
21. *Mexican-American Commission for the Eradication of the Foot-and-Mouth Disease*[14]	—	—	—	—	—	—	—	—	24.9	60.3	194.2	134.2	65.8
22. *National Corn Commission*	—	—	—	—	—	—	—	—	4.1	4.1	4.1	4.1	3.9
Agricultural development													
23. *National Olive Commission*	—	—	—	—	—	—	—	—	—	—	—	0.3	4.3
Agricultural development													
24. *National Commission for Coffee*	—	—	—	—	—	—	—	—	—	—	—	1.0	1.0
Agricultural development													
25. *National Warehouses*	0.2	0.1	0.1	0.5	0.3	1.6	2.3	0.5	2.5	0.2	0.9	0.4	[illegible]
Buildings													
26. *Federal Local Public Works Boards*	*	3.4	3.7	3.5	3.2	3.4	3.9	3.7	21.5	62.6	18.8	15.6	[illegible]
Electric power	—	—	—	—	—	—	—	—	—	0.1	0.1	0.2	
Harbor works	—	—	—	—	—	—	—	—	—	5.4	0.1	—	*
Streets and paving	—	—	—	—	—	—	—	—	8.1	19.2	1.1	0.3	
Water and sewerage	—	—	—	—	—	—	—	—	9.5	19.8	10.2	3.7	
Miscellaneous municipal works	—	—	—	—	—	—	—	—	1.3	8.6	3.3	1.9	
Schools	—	—	—	—	—	—	—	—	1.9	5.0	2.9	3.7	
Hospitals	—	—	—	—	—	—	—	—	—	3.1	0.1	—	
Dwellings	—	—	—	—	—	—	—	—	0.7	0.1	—	—	
Miscellaneous	—	—	—	—	—	—	—	—	—	1.3	1.0	5.8	20.0
III *STATE AND LOCAL GOVERNMENTS*	**31.8**	**44.9**	**65.8**	**56.2**	**86.6**	**99.9**	**133.3**	**141.0**	**171.6**	**156.8**	**193.6**	**196.5**	**230.0**
27. *States and territories*	10.6	21.2	20.2	10.6	31.6	35.9	45.2	57.1	64.4	64.6	75.4	77.4	100.0
Highways, hospitals, irrigation, buildings, etc.													
28. *Department of the Federal District*	17.1	19.1	40.9	39.4	37.0	42.9	53.1	72.0	92.9	76.1	99.6	97.5	100.0
Water and drainage (including Lerma)	6.0	6.5	15.5	12.9	16.6	21.5	29.5	48.8	35.0	40.1	51.6	68.7	56.6
Schools	0.5	0.6	3.4	3.4	2.3	3.1	2.6	2.8	9.6	1.2	0.3	*	*
Hospitals	0.1	0.1	—	0.1	0.1	0.2	0.5	1.0	1.5	0.3	1.0	*	*
Public buildings	0.3	1.5	0.7	1.9	2.2	1.7	2.3	2.0	9.7	11.7	5.2	*	*
Markets	0.4	0.4	0.3	0.8	1.0	0.7	0.9	1.1	1.9	2.8	3.6	*	*
Paving	6.0	5.9	14.2	12.6	9.1	8.8	8.6	5.8	22.0	11.7	24.1	—	—
Public lighting	1.5	1.6	2.7	2.0	1.8	2.4	2.9	3.1	4.3	4.3	6.6	15.0	25.0
Miscellaneous	2.3	2.5	4.1	5.7	3.9	4.5	5.8	7.4	8.9	4.0	7.2	13.8	18.4
29. *Municipalities*	4.1	4.6	4.7	6.2	18.0	21.1	35.0	11.9	14.3	16.1	18.6	21.6	30.0
Water, markets, slaughterhouses, paving, buildings, etc.													

Source: Combined Mexican Working Party based on information from the various ministries and agencies.

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*Not available.

[1] Gross annual investment in construction and equipment, including in most cases maintenance costs, and excluding land.

[2] Due to adjustments made in this table after the preparation of other tables, there are slight differences between the final figures for public investment shown in this table and the figures for public investment shown in other tables of this report for the years 1948-51. Data for 1951 are preliminary.

[3] Some minor investments of other, nonspecified agencies, are omitted.

[4] Through 1946, National Irrigation Commission, Ministry of Agriculture and Development. From 1947 on, excludes investments in sanitation engineering that are included in figures for the Ministry of Health and Public Welfare. Maintenance costs of irrigation districts are included in all years.

[5] Irrigation works and maintenance costs of irrigation districts are not included.

[6] Including grant-in-aid to state highways.

[7] Conducted by the Ministry of Hydraulic Resources from 1947.

[8] In 1942 and 1943, military air bases not built by the Ministry of Defense are included.

[9] Agencies of minor importance from the viewpoint of their investments are not included.

[10] Including the Ferrocarril Interoceánico from 1947.

[11] In 1948, investments made by the Ministry of Communications and Public Works.

[12] Direct investments only.

[13] Through 1943, Ministry of Public Education.

[14] Including National Commission Against Foot-and-Mouth Disease.

TABLE 19

PUBLIC INVESTMENT

Principal Agencies of the Federal Government.
Local Governments, Autonomous Public Agencies, and State Enterprises
Gross investment, classified by purpose, 1939-1951
(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948[1]	1949[1]	1950[1]	1951[1]
TOTAL PUBLIC INVESTMENT	**247.7**	**316.0**	**361.7**	**480.9**	**617.5**	**713.7**	**928.4**	**1,105.4**	**1,378.3**	**1,616.4**	**2,026.0**	**2,646.6**	**3,007.5**
I *AGRICULTURE AND RESOURCES*	*39.7*	*44.3*	*58.7*	*65.2*	*86.0*	*124.8*	*148.0*	*195.4*	*266.1*	*324.1*	*504.2*	*551.8*	*595.9*
Agricultural development	1.3	1.2	1.2	1.7	2.2	6.1	5.0	3.3	10.5	10.0	7.2	12.4	19.4
Resources conservation	0.3	6.8	0.8	0.5	0.8	0.2	1.0	0.8	1.4	4.2	1.5	2.6	2.3
Campaign against foot-and-mouth disease	—	—	—	—	—	—	—	—	24.9	60.3	194.2	134.2	65.8
Irrigation	38.1	36.3	56.7	63.0	83.0	117.1	139.6	189.0	228.3	249.3	260.7	371.9	502.1
Fertilizer industry	—	—	—	—	—	1.4	2.4	2.3	1.0	0.3	40.6	30.7	6.3
II *TRANSPORTATION AND COMMUNICATIONS*	*143.2*	*151.6*	*188.3*	*290.0*	*374.7*	*387.5*	*455.6*	*526.0*	*671.1*	*686.1*	*756.7*	*1,090.4*	*1,172.9*
Highways	51.3	56.9	88.7	155.2	180.6	166.0	183.8	230.9	233.6	302.3	332.6	374.7	546.5
Railroads	88.6	89.1	94.0	122.4	175.0	202.5	250.2	275.3	417.0	339.2	352.5	605.4	544.4
Airports	—	—	—	—	—	—	—	—	1.5	2.1	23.0	24.4	18.8
Harbors and ports	2.6	4.8	5.0	10.9	17.3	17.1	20.1	18.0	16.5	32.2	39.6	83.5	44.4
Telegraphy and radiocommunications	0.7	0.8	0.6	1.5	1.8	1.9	1.5	1.8	2.5	10.3	9.0	2.4	18.8
III *ELECTRIC POWER AND PETROLEUM*	*27.0*	*60.7*	*28.4*	*38.5*	*36.0*	*60.4*	*129.6*	*149.3*	*162.8*	*273.1*	*423.3*	*635.1*	*687.9*
Electric power	2.9	3.4	4.0	10.2	9.5	19.8	16.2	38.2	75.9	98.9	173.0	236.8	262.9
Petroleum industry	24.1	57.3	24.4	28.3	26.5	40.6	113.4	111.1	85.3	167.5	246.7	398.3	425.0
Machine industry	—	—	—	—	—	—	—	—	1.6	6.7	3.6	—	—
IV *SOCIAL AND MUNICIPAL CONSTRUCTION*	*25.7*	*32.2*	*58.7*	*58.2*	*67.2*	*92.0*	*127.3*	*152.9*	*182.1*	*233.9*	*238.2*	*254.7*	*430.2*
Hospitals	3.0	3.7	6.5	7.4	6.9	10.5	13.1	20.0	35.6	39.6	25.9	22.3	32.8
Schools and educational institutions	2.4	3.6	4.7	4.7	3.3	12.4	12.1	13.1	24.4	22.7	18.0	32.8	101.7
Municipal construction and services	20.3	24.9	47.5	46.1	57.0	69.1	102.1	119.8	112.6	151.0	177.6	166.2	261.5
Dwellings	—	—	—	—	—	—	—	—	9.5	20.6	16.7	33.4	34.2
V *MISCELLANEOUS*	*12.1*	*27.2*	*27.6*	*29.0*	*53.6*	*49.0*	*67.9*	*81.8*	*96.2*	*99.2*	*103.6*	*114.7*	*120.6*
Miscellaneous buildings	0.3	3.0	2.5	3.8	3.5	3.3	5.8	12.3	26.5	25.8	20.0	26.0	2.2
Defense construction	1.2	3.0	4.9	14.6	18.5	9.8	16.9	12.4	5.3	8.8	8.2	11.3	18.4
Miscellaneous construction by State governments	10.6	21.2	20.2	10.6	31.6	35.9	45.2	57.1	64.4	64.6	75.4	77.4	100.0

Source: Table 18.

[1] Due to adjustments made in this table after the preparation of other tables, there are slight differences between the final figures for public investment shown in this table and the figures for public investment shown in other tables of this report for the years 1948-51. Data for 1951 are preliminary.

TABLE 20

PUBLIC INVESTMENT

Principal Agencies of the Federal Government.
Local Governments, Autonomous Public Agencies, and State Enterprises
Gross investment, classified by purpose, 1939-1951
(Percentages)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
TOTAL PUBLIC INVESTMENT......	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
I. *AGRICULTURE AND RESOURCES*	*16.0*	*14.0*	*16.2*	*13.6*	*13.9*	*17.5*	*15.9*	*17.7*	*19.3*	*20.1*	*24.9*	*20.9*	*19.8*
Agricultural development	0.5	0.4	0.3	0.4	0.4	0.9	0.5	0.3	0.8	0.6	0.4	0.5	0.6
Resource conservation	0.1	2.2	0.2	0.1	0.1	*	0.1	0.1	0.1	0.3	0.1	0.1	0.1
Campaign against foot-and-mouth disease	—	—	—	—	—	—	—	—	1.8	3.7	9.6	5.1	2.2
Irrigation	15.4	11.4	15.7	13.1	13.4	16.4	15.0	17.1	16.6	15.4	12.9	14.1	16.7
Fertilizer industry	—	—	—	—	—	0.2	0.3	0.2	0.1	*	2.0	1.2	0.2
II. *TRANSPORTATION AND COMMUNICATIONS*	*57.8*	*48.0*	*52.1*	*60.3*	*60.7*	*54.3*	*49.1*	*47.6*	*48.7*	*42.4*	*37.3*	*41.2*	*39.0*
Highways	20.7	18.0	24.5	32.3	29.2	23.3	19.8	20.9	16.9	18.7	16.4	14.2	18.2
Railroads	35.8	28.2	26.0	25.4	28.3	28.3	26.9	24.9	30.3	21.0	17.4	22.9	18.1
Airports	—	—	—	—	—	—	—	—	0.1	0.1	1.1	0.9	0.6
Harbors and ports	1.0	1.5	1.4	2.3	2.8	2.4	2.2	1.6	1.2	2.0	2.0	3.2	1.5
Telegraphy and radiocommunications	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.6	0.4	0.1	0.6
III. *ELECTRIC POWER AND PETROLEUM*	*10.9*	*19.2*	*7.8*	*8.0*	*5.8*	*8.5*	*14.0*	*13.5*	*11.8*	*16.9*	*20.9*	*24.0*	*22.9*
Electric power	1.2	1.1	1.1	2.1	1.5	2.8	1.7	3.5	5.5	6.1	8.5	8.9	8.7
Petroleum industry	9.7	18.1	6.7	5.9	4.3	5.7	12.2	10.1	6.2	10.4	12.2	15.0	14.1
Machine industry	—	—	—	—	—	—	—	—	0.1	0.4	0.2	—	—
IV. *SOCIAL AND MUNICIPAL CONSTRUCTION*	*10.4*	*10.2*	*16.2*	*12.1*	*10.9*	*12.9*	*13.7*	*13.8*	*13.2*	*14.5*	*11.8*	*9.6*	*14.3*
Hospitals	1.2	1.2	1.8	1.5	1.1	1.5	1.4	1.8	2.6	2.4	1.3	0.8	1.1
Schools and educational institutions	1.0	1.1	1.3	1.0	0.5	1.7	1.3	1.2	1.8	1.4	0.9	1.2	3.4
Municipal construction and services	8.2	7.9	13.1	9.6	9.2	9.7	11.0	10.8	8.2	9.3	8.8	6.3	8.7
Dwellings	—	—	—	—	—	—	—	—	0.7	1.3	0.8	1.3	1.1
V. *MISCELLANEOUS*	*4.9*	*8.6*	*7.6*	*6.0*	*8.7*	*6.9*	*7.3*	*7.4*	*7.0*	*6.1*	*5.1*	*4.3*	*4.0*
Miscellaneous buildings	0.1	0.9	0.7	0.8	0.6	0.5	0.6	1.1	1.9	1.6	1.0	1.0	0.1
Defense construction	0.5	0.9	1.3	3.0	3.0	1.4	1.8	1.1	0.4	0.5	0.4	0.4	0.6
Miscellaneous construction by State Governments	4.3	6.7	5.6	2.2	5.1	5.0	4.9	5.2	4.8	4.0	3.7	2.9	3.3

Source: Table 19.

*Less than 0.05%.

TABLE 22

FINANCING OF PUBLIC INVESTMENT: ORIGIN OF RESOURCES, 1939-1951

Principal Agencies of the Federal Government, Local Governments,
Autonomous Public Agencies and State Enterprises
(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951[1]
TOTAL FINANCING	**264.6**	**336.2**	**383.7**	**492.5**	**626.1**	**723.5**	**952.6**	**1,130.5**	**1,431.1**	**1,631.3**	**1,964.2**	**2,665.6**	**3,050.4**
I. INTERNAL FINANCING	**264.6**	**336.2**	**387.3**	**434.0**	**601.5**	**708.5**	**909.9**	**966.0**	**1,274.6**	**1,491.5**	**1,648.9**	**2,329.2**	**2,580.5**
Public agencies	*273.8*	*338.9*	*390.4*	*426.5*	*606.1*	*712.3*	*849.1*	*914.5*	*1,138.1*	*1,513.9*	*1,734.8*	*2,181.0*	*2,320.8*
Féderal Government:[2]	126.7	143.8	196.5	218.9	339.4	387.4	431.0	428.9	651.0	893.2	947.6	1,173.1	1,175.9
Fiscal resources	94.2	107.5	66.5	61.2	204.1	376.6	320.9	343.6	540.9	851.9	917.9	1,151.1	1,175.7
Loans	32.5	36.3	130.0	157.7	135.3	10.8	110.1	85.3	110.1	41.3	29.7	22.0	0.2
Local governments[3]	41.4	53.0	75.4	76.6	102.5	118.6	151.1	159.2	151.7	149.9	226.1	239.6	297.5
Nacional Financiera[4]	—	—	—	—	—	3.0	4.0	13.0	24.0	38.7	0.8	9.3	15.0
Other autonomous public agencies[5]	—	0.6	—	0.7	0.5	—0.1	—0.1	79.9	19.5	66.2	33.0	35.0	46.3
Resources and reinvestments of autonomous agencies[6]	105.7	141.5	118.5	130.3	163.7	203.4	263.1	233.5	291.9	365.9	527.3	724.0	786.1
Unclassified loans[7]	*—9.2*	*—2.7*	*—9.0*	*3.1*	*—7.1*	*—11.9*	*44.3*	*13.8*	*131.1*	*—27.2*	*—114.4*	*82.5*	*8.9*
Private capital	—	—	—	—	—	—	—	—	—	2.0	24.0	55.7	191.6
Unclassified	—	—	*2.3*	*4.4*	*2.5*	*8.1*	*16.5*	*37.7*	*5.4*	*2.8*	*4.5*	*10.0*	*59.2*
II. EXTERNAL FINANCING	—	—	—	**58.5**	**24.6**	**15.0**	**42.7**	**164.5**	**156.5**	**139.8**	**315.3**	**336.4**	**469.9**
Public	—	—	—	*48.5*	*14.6*	*15.0*	*42.7*	*158.8*	*136.3*	*126.3*	*241.1*	*291.4*	*266.6*
International Bank for Reconstruction and Development	—	—	—	—	—	—	—	—	—	—	22.6	62.8	86.3
Export-Import Bank	—	—	—	48.5	—	—	40.3	158.8	120.0	78.3	63.9	118.3	137.6
U. S. Government[8]	—	—	—	—	14.6	15.0	2.4	—	16.3	48.0	154.6	110.3	42.7
Private													
Banks and others	—	—	—	*10.0*	*10.0*	—	—	*5.7*	*20.2*	*13.5*	*74.2*	*45.0*	*203.3*

Source: Table 21.

[1] Data for 1951 are preliminary.

[2] Funds used by the Federal Government or placed at the disposal of autonomous public agencies, state enterprises and other public authorities.

[3] State governments, municipalities and Federal District Department (including loans received).

[4] Loans and capital made available to other public agencies (excepting Federal, state and municipal governments).

[5] Loans and subsidies of Petróleos Mexicanos and the Federal Electricity Commission to other public agencies; loans and direct investments of the National Mortgage and Public Works Bank (excluding loans to municipalities and states) and subsidies and loans received by the Federal Local Public Works Boards.

[6] Investment or reinvestment of reserves, profits, surpluses and other income.

[7] Largely net changes in short-term loans.

[8] U. S. Railroad Mission, 1943-1944, and foot-and-mouth disease eradication campaign, 1947-1950.

TABLE 21

Financing of Public Investment, 1939-1951[1]

Principal Federal Government Agencies, Local Governments, Autonomous Public Agencies and State Enterprises
Data according to agencies and origin of resources
(millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951[2]
TOTAL FINANCING	**264.6**	**336.2**	**383.7**	**492.5**	**626.1**	**723.5**	**952.6**	**1,130.5**	**1,431.1**	**1,631.3**	**1,964.2**	**2,665.6**	**3,050.4**
I. *FEDERAL GOVERNMENT*	**128.3**	**143.2**	**196.7**	**286.6**	**347.0**	**360.9**	**410.3**	**524.5**	**563.2**	**691.0**	**778.9**	**983.6**	**1,309.2**
1. *Ministry of Hydraulic Resources*	*38.1*	*36.3*	*56.7*	*63.0*	*83.0*	*117.1*	*139.6*	*189.0*	*228.3*	*249.3*	*260.7*	*371.9*	*502.1*
Domestic financing:													
Federal Government: fiscal resources	39.5	30.6	—	—	80.6	105.3	152.9	194.8	210.8	223.4	237.1	279.3	311.7
Loans	—	—	50.0	67.1	—	—	—	—	—	—	—	—	—
State Governments: fiscal resources	—	—	—	—	—	—	—	—	6.0	8.1	6.2	5.0	16.8
Private grants	—	—	—	—	—	—	—	—	—	—	21.3	47.7	182.8
Adjustments	—1.4	5.7	6.7	—4.1	2.4	11.8	—13.3	—5.8	11.5	17.8	—4.0	27.9	—49.4
External financing:													
Bank of America	—	—	—	—	—	—	—	—	—	—	0.1	12.0	7.3
Export-Import Bank	—	—	—	—	—	—	—	—	—	—	—	—	32.9
2. *Ministry of Agriculture and Livestock*	*1.4*	*7.9*	*1.9*	*1.7*	*2.7*	*4.7*	*3.7*	*3.6*	*5.3*	*9.9*	*3.7*	*8.8*	*10.6*
Domestic financing:													
Federal Government: fiscal resources	1.4	7.9	1.9	1.7	2.7	4.7	3.7	3.6	5.3	9.9	3.7	8.8	10.6
3. *Ministry of Communications and Public Works*	*82.1*	*87.6*	*119.4*	*186.7*	*215.7*	*200.9*	*212.3*	*260.3*	*292.2*	*363.1*	*411.5*	*462.1*	*616.5*
Domestic financing:													
Federal Government: fiscal resources	40.0	43.2	33.9	30.6	67.5	174.7	93.5	90.9	164.6	327.1	325.5	418.9	433.4
Loans	32.5	36.3	75.9	87.2	132.3	7.5	101.0	54.2	84.1	8.5	7.2	—	—
State Governments: fiscal resources	9.6	8.1	9.6	20.4	15.9	18.7	17.8	18.2	18.8	22.3	23.8	24.8	41.7
Credit	—	—	—	—	—	—	—	—	—	—	14.8	9.4	7.3
External financing:													
Export-Import Bank: credit	—	—	—	48.5	—	—	—	97.0	24.7	5.2	—	—	—
Bank of America: credit	—	—	—	—	—	—	—	—	—	—	40.2	9.0	134.1
4. *Ministry of the Navy*	*2.6*	*4.8*	*5.0*	*10.9*	*17.3*	*15.2*	*15.8*	*15.2*	*14.5*	*24.7*	*37.1*	*81.5*	*44.2*
Domestic financing:													
Federal Government: fiscal resources	2.6	4.8	5.0	10.9	17.3	15.2	15.8	15.2	4.5	—5.3	17.1	61.5	44.2
Loans	—	—	—	—	—	—	—	—	10.0	30.0	20.0	20.0	—
5. *Ministry of Health and Public Welfare*	*2.9*	*3.6*	*8.8*	*9.7*	*9.8*	*13.2*	*22.0*	*44.0*	*17.6*	*35.2*	*57.7*	*48.0*	*117.4*
Domestic financing:													
Federal Government: fiscal resources	2.9	3.6	6.5	7.3	6.8	7.1	7.7	6.3	16.3	27.2	19.0	19.8	29.2
National Mortgage and Public Works Bank: credit	—	—	—	—	—	—	—	—	—	6.1	14.0	16.5	29.0
State Governments: fiscal resources	—	—	—	—	—	—	—	—	—	4.3	2.1	6.8	59.2
Other sources (unclassified)	—	—	2.3	2.4	3.0	6.1	14.3	37.7	5.4	2.8	4.5	4.9	
Adjustment	—	—	—	—	—	—	—	—	—4.1	—5.2	1.1	—	—
External financing:													
Export-Import Bank	—	—	—	—	—	—	—	—	—	—	17.0	—	—
6. *Ministry of Defense and Department of Military Industry*	*1.2*	*3.0*	*4.9*	*14.6*	*18.5*	*9.8*	*16.9*	*12.4*	*5.3*	*8.8*	*8.2*	*11.3*	*18.4*
Domestic financing:													
Federal Government: fiscal resources	1.2	3.0	4.9	4.6	8.5	9.8	16.9	12.4	5.3	8.8	8.2	8.3	8.4
National Mortgage and Public Works Bank: credit	—	—	—	—	—	—	—	—	—	—	—	3.0	10.0
External financing:													
Private capital	—	—	—	10.0	10.0	—	—	—	—	—	—	—	—
II. *ANTONOMOUS PUBLIC AGENCIES AND STATE ENTERPRISES*	**104.5**	**148.1**	**121.2**	**149.7**	**192.5**	**262.7**	**409.0**	**465.0**	**696.3**	**793.5**	**991.7**	**1,485.5**	**1,511.2**
7. *National Railways of Mexico*	*72.4*	*77.2*	*79.4*	*100.4*	*141.9*	*175.6*	*220.2*	*225.2*	*356.6*	*286.8*	*296.8*	*522.8*	*470.0*
Domestic financing:													
Federal Government: fiscal resources	—	—	—	—	1.3	18.7	*	0.3	52.7	169.1	207.6	96.5	60.0
Resources of the National Railways of Mexico	81.6	79.9	88.6	97.3	133.1	154.7	173.7	180.4	157.3	144.7	220.5	256.1	310.0
Credit	—9.2	—2.7	—9.2	3.1	—7.1	—12.8	44.1	13.0	86.0	—61.1	—132.8	70.5	1.6
External financing:													
United States Government: grant	—	—	—	—	14.6	15.0	2.4	—	—	—	—	—	—
Export-Import Bank: credit	—	—	—	—	—	—	—	31.5	60.6	34.1	1.5	99.7	98.4
8. *Petróleos Mexicanos*	*24.1*	*57.3*	*24.4*	*28.3*	*26.5*	*40.6*	*113.4*	*111.1*	*85.3*	*167.5*	*246.7*	*398.3*	*425.0*
Domestic financing:													
Reinvestment of Petróleos Mexicanos	24.1	57.3	24.4	28.3	26.5	40.6	73.1	20.6	85.3	159.5	232.7	374.3	395.0
Loans	—	—	—	—	—	—	—	82.5	—	—	—	—	—
External financing:													
Export-Import Bank: credit	—	—	—	—	—	—	40.3	8.0	—	—	—	—	—
Private capital	—	—	—	—	—	—	—	—	—	8.0	14.0	24.0	30.0
9. *Federal Electricity Commission*	*4.2*	*5.7*	*10.4*	*12.3*	*16.1*	*19.8*	*38.7*	*63.3*	*110.8*	*104.2*	*79.2*	*215.7*	*295.6*
Domestic financing:													
Federal Government: fiscal resources	4.3	5.7	6.3	9.2	14.1	20.2	34.9	15.7	42.8	70.4	73.6	165.7	192.4
Loans	—	—	4.1	3.4	2.5	—	—	16.4	13.6	—	—	—	—
Nacional Financiera: credit	—	—	—	—	—	—	—	—	—	13.7	—	—	—
Resources of the Federal Electricity Commission: gross profits	—	—	—	—	—	—	4.1	3.3	1.4	0.9	2.6	9.5	†
2% from enterprises	—	—	—	—	—	—	—	—	—	—	—	0.3	†
Adjustment: less loans to other agencies	—0.1	*	*	—0.3	—0.5	—0.4	—0.3	—0.1	—1.9	—25.3	—43.5	—22.6	†
External financing:													
Export-Import Bank: credit	—	—	—	—	—	—	—	22.3	34.7	39.0	4.0	—	—
International Bank for Reconstruction and Development: credit	—	—	—	—	—	—	—	—	—	—	22.6	62.8	86.3
Other loans	—	—	—	—	—	—	—	5.7	20.2	5.5	19.9	—	16.9
10. *New Electric Company of Chapala*	†	†	†	*2.0*	*2.0*	*2.0*	*2.2*	*11.0*	*23.0*	*25.0*	*30.0*	*24.6*	—
Domestic financing:													
Federal Government: fiscal resources	—	—	—	—	2.5	—	—	—	—	—	12.5	21.0	—
Federal Electricity Commission: credit	—	—	—	—	—	—	—	—	—	—	4.7	—	—
Nacional Financiera: credit	—	—	—	—	—	—	—	11.0	23.0	25.0	—	—	—
Unclassified	—	—	—	2.0	—0.5	2.0	2.2	—	—	—	—	—	—
External financing:													
Export-Import Bank	—	—	—	—	—	—	—	—	—	—	12.8	3.6	—
11. *Fertilizer and Guano Company*	—	—	—	—	—	*3.0*	*4.0*	*2.0*	*1.0*	—	*47.7*	*31.5*	*21.3*
Domestic financing:													
Federal Government: fiscal resources	—	—	—	—	—	—	—	—	—	—	18.3	12.2	15.0
Nacional Financiera: investment	—	—	—	—	—	3.0	4.0	2.0	1.0	—	—	—	—
Credit	—	—	—	—	—	—	—	—	—	—	0.8	4.3	—
External financing:													
Export-Import Bank: credit	—	—	—	—	—	—	—	—	—	—	28.6	15.0	6.3

TABLE 21—(Continued)

Financing of Public Investment, 1939-1951[1]

Principal Federal Government Agencies, Local Governments, Autonomous Public Agencies and State Enterprises
Data according to agencies and origin of resources
(millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951[2]
12. *Anahuac Motors and Machine Factory*	—	—	—	—	—	—	—	—	*5.7*	*4.3*	*3.8*	—	—
Domestic financing:													
Federal Government: fiscal resources	—	—	—	—	—	—	—	—	5.7	2.2	1.9	—	—
Petróleos Mexicanos: investment	—	—	—	—	—	—	—	—	—	2.1	1.9	—	—
13. *Mexican Free Ports*	—	—	—	—	*0.5*	*3.3*	*9.1*	*14.7*	*2.4*	*2.8*	*2.5*	*2.0*	*0.2*
Domestic financing:													
Federal Government: loans	—	—	—	—	0.5	3.3	9.1	14.7	2.4	2.8	2.5	2.0	0.2
14. *National Committee of Farm-to-Market Roads*	—	—	—	—	—	—	—	—	—	*3.3*	*5.3*	*16.1*	*31.0*
Domestic financing:													
Federal Government: fiscal resources	—	—	—	—	—	—	—	—	—	2.0	2.1	6.0	13.0
State Government: fiscal resources	—	—	—	—	—	—	—	—	—	1.3	2.5	4.0	9.0
Private contributions	—	—	—	—	—	—	—	—	—	—	0.7	6.0	8.8
Resources of the National Committee of Farm-to-Market Roads	—	—	—	—	—	—	—	—	—	—	—	0.1	0.2
15. *Southern Construction Company*	—	—	—	—	—	—	—	—	—	—	—	*16.0*	*15.0*
Domestic financing:													
Nacional Financiera: investment	—	—	—	—	—	—	—	—	—	—	—	5.0	—
Federal Government: fiscal resources	—	—	—	—	—	—	—	—	—	—	—	11.0	—
External financing:													
Bank of America: credit	—	—	—	—	—	—	—	—	—	—	—	—	15.0
16. *General Office for Civil Retirement Pensions*	—	*1.5*	*1.8*	*1.9*	*1.4*	*1.4*	*2.1*	*8.2*	*13.4*	*19.8*	*7.6*	*14.2*	*22.2*
Domestic financing:													
Resources of the General Office for Civil and Retirement Pensions													
17. *Social Security Institute*	—	—	—	—	—	*3.2*	*6.1*	*14.7*	*27.1*	*29.9*	*28.8*	*32.2*	*30.8*
Domestic financing:													
Resources of the Social Security Institute													
18. *National Mortgage and Public Works Bank*	—	—	—	—	—	—	—	—	*5.2*	*6.5*	*10.0*	*19.5*	*10.3*
Domestic financing:													
Credit: mortgage bonds													
19. *Committee for the Federal School Construction Program*	*1.9*	*3.0*	*1.3*	*1.3*	*0.9*	*9.0*	*9.1*	*10.3*	*12.9*	*16.5*	*14.8*	*18.4*	*14.7*
Domestic financing:													
Federal Government: fiscal resources	1.9	3.0	1.3	1.3	0.9	9.0	9.1	10.3	12.9	13.5	11.8	14.4	14.7
Private contributions	—	—	—	—	—	—	—	—	—	2.0	2.0	2.0	†
Credit	—	—	—	—	—	—	—	—	—	1.0	1.0	2.0	—
20. *University City of Mexico*	—	—	—	—	—	—	—	—	—	—	—	*18.0*	*80.0*
Domestic financing:													
Federal Government: fiscal resources	—	—	—	—	—	—	—	—	—	—	—	—	65.0
Federal District Government: fiscal resources	—	—	—	—	—	—	—	—	—	—	—	2.5	—
Petróleos Mexicanos: grant	—	—	—	—	—	—	—	—	—	—	—	0.4	—
Nacional Financiera: credit	—	—	—	—	—	—	—	—	—	—	—	—	15.0
National University	—	—	—	—	—	—	—	—	—	—	—	10.0	—
Other contributions	—	—	—	—	—	—	—	—	—	—	—	5.1	—
21. *Mexican-American Commission for the Eradication of the Foot-and-mouth disease*	—	—	—	—	—	—	—	—	*25.0*	*60.2*	*194.2*	*134.2*	*65.9*
Domestic financing:													
Federal Government: fiscal resources	—	—	—	—	—	—	—	—	8.5	12.2	20.9	16.6	18.3
Resources of the Commission	—	—	—	—	—	—	—	—	0.2	—	18.7	7.3	4.9
External financing:													
United States Government: grant	—	—	—	—	—	—	—	—	16.3	48.0	154.6	110.3	42.7
22. *National Corn Commission*	—	—	—	—	—	—	—	—	*4.1*	*4.1*	*4.1*	*4.1*	*3.9*
Domestic financing:													
Federal Government: fiscal resources	—	—	—	—	—	—	—	—	4.2	4.2	4.2	4.0	4.0
Adjustment	—	—	—	—	—	—	—	—	—0.1	—0.1	—0.1	—0.1	—0.1
23. *National Olive Commission*	—	—	—	—	—	—	—	—	—	—	—	*0.3*	*4.3*
Domestic financing:													
Federal Government: fiscal resources													
24. *National Commission for Coffee*	—	—	—	—	—	—	—	—	—	—	—	*1.0*	*1.0*
Domestic financing:													
Federal Government: fiscal resources													
25. *National Warehouses*	*1.9*	—	*0.2*	—	—	*1.4*	*0.2*	*0.8*	*2.3*	—	*1.4*	*1.0*	—
Domestic financing:													
Federal Government and credit institutions: capital	1.9	—	—	—	—	0.5	—	—	1.9	—	0.9	0.4	—
National credit institutions: credit	—	—	0.2	—	—	0.9	0.2	0.8	0.4	—	0.5	0.6	—
26. *Federal Local Public Works Boards*	—	*3.4*	*3.7*	*3.5*	*3.2*	*3.4*	*3.9*	*3.7*	*21.5*	*62.6*	*18.8*	*15.6*	*20.0*
Domestic financing:													
Fiscal resources of the Boards	—	2.8	3.7	2.8	2.7	3.5	4.0	6.3	7.2	11.1	16.5	20.0	23.0
Subsidies and credits	—	0.6	—	0.7	0.5	—0.1	—0.1	—2.6	14.3	51.5	2.3	—4.4	—3.0
III. *STATE AND LOCAL GOVERNMENTS*	**31.8**	**44.9**	**65.8**	**56.2**	**86.6**	**99.9**	**133.3**	**141.0**	**171.6**	**146.8**	**193.6**	**196.5**	**230.0**
27. *States and Territories*	*10.6*	*21.2*	*20.2*	*10.6*	*31.6*	*35.9*	*45.2*	*57.1*	*64.4*	*64.6*	*75.4*	*77.4*	*100.0*
Domestic financing:													
Fiscal resources and loans													
28. *Department of the Federal District*	*17.1*	*19.1*	*40.9*	*39.4*	*37.0*	*42.9*	*53.1*	*72.0*	*92.9*	*66.1*	*99.6*	*97.5*	*100.0*
Domestic financing:													
Loans	7.8	7.4	15.5	6.7	3.7	2.4	2.4	5.5	0.8	—	10.0	5.0	5.0
Miscellaneous loans	—	—	—	—	—	—	—	—	44.7	32.9	2.1	—	—
Fiscal resources	9.3	11.7	25.4	32.7	33.3	40.5	50.7	66.5	47.4	33.2	87.5	92.5	95.0
29. *Municipalities*	*4.1*	*4.6*	*4.7*	*6.2*	*18.0*	*21.1*	*35.0*	*11.9*	*14.3*	*16.1*	*18.6*	*21.6*	*30.0*
Domestic financing:													
Fiscal resources and loans													

Source: Combined Mexican Working Party based on information from the various ministries and agencies.

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*Less than 50,000 pesos.

†Not available.

[1] Immediate origin of the funds with which public investment is financed. Funds of domestic origin are distinguished from those of external origin, and both types are classified according to the agency which provides them (regardless of the way in which the agency itself obtains the funds). The table does not show, consequently, if the ultimate origin of the resources is public or private. The principal Federal Government departments and autonomous public agencies and state enterprises are included. The scope of each agency is explained in the notes to the table on total public investment by agencies. The total for each year does not coincide with the total in the table on public investment, due to the lack of sufficient data to make a complete adjustment. The discrepancies, which are small, are the following:

Total Public investment	247.7	316.0	361.7	480.9	617.5	713.7	928.4	1,105.4	1,378.3	1,616.4	2,026.0	2,646.6	3,007.5
Total financing	264.6	336.2	383.7	492.5	626.1	723.5	952.6	1,130.5	1,431.1	1,631.3	1,964.2	2,665.6	3,050.4
Discrepancy (2-1)	+16.9	+20.2	+22.0	+11.6	+ 8.6	+ 9.8	+24.2	+ 25.1	+ 52.8	+ 14.9	− 61.8	+ 19.0	+ 42.9

[2] Data for 1951 are preliminary.

TABLE 23

Financing of Public Investment: Origin of Resources: 1939-1951
(Percentages)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
TOTAL FINANCING	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.**	**100.0**
I. *INTERNAL FINANCING*	*100.0*	*100.0*	*100.0*	*88.1*	*96.1*	*97.9*	*95.5*	*85.4*	*89.1*	*91.4*	*83.9*	*87.4*	*84.6*
Public agencies	*103.5*	*100.8*	*101.7*	*86.6*	*96.8*	*98.4*	*89.1*	*80.9*	*79.5*	*92.8*	*88.3*	*81.8*	*76.1*
Federal Government	47.9	42.8	51.2	44.4	54.2	53.5	45.2	37.9	45.5	54.7	48.2	44.0	38.5
Fiscal resources	35.6	32.0	17.3	12.4	32.6	52.0	33.7	30.4	37.8	52.2	46.7	43.2	38.5
Loans	12.3	10.8	33.9	32.0	21.6	1.5	11.5	7.5	7.7	2.5	1.5	0.8	*
Local Governments	15.7	15.8	19.6	15.6	16.4	16.4	15.9	14.1	10.6	9.2	11.5	9.0	9.8
Nacional Financiera	—	—	—	—	—	0.4	0.4	1.1	1.7	2.4	*	0.3	0.5
Other autonomous public agencies	—	0.2	—	0.1	0.1	—	—	7.1	1.4	4.1	1.7	1.3	1.5
Resources and reinvestment of public agencies	39.9	42.0	30.9	26.5	26.1	28.1	27.6	20.7	20.4	22.4	26.8	27.2	25.8
Unclassified loans	*—3.5*	*—0.8*	*—2.3*	*0.6*	*—1.1*	*—1.6*	*4.7*	*1.2*	*9.2*	*—1.7*	*—5.8*	*3.1*	*0.3*
Private capital	—	—	—	—	—	—	—	—	—	*0.1*	*1.2*	*2.1*	*6.3*
Unclassified	—	—	*0.6*	*0.9*	*0.4*	*1.1*	*1.7*	*3.3*	*0.4*	*0.2*	*0.2*	*0.4*	*1.9*
II. *EXTERNAL FINANCING*	—	—	—	**11.9**	**3.9**	**2.1**	**4.5**	**14.6**	**10.9**	**8.6**	**16.1**	**12.6**	**15.4**
Public	—	—	—	*9.9*	*2.3*	*2.1*	*4.5*	*14.1*	*9.5*	*7.7*	*12.3*	*10.9*	*8.7*
International Bank for Reconstruction and Development	—	—	—	—	—	—	—	—	—	—	1.2	2.4	2.8
Export-Import Bank	—	—	—	9.9	—	—	4.2	14.1	8.4	4.8	3.3	4.4	4.5
U. S. Government	—	—	—	—	2.3	2.1	0.3	—	1.1	2.9	7.9	4.1	1.4
Private	—	—	—	*2.0*	*1.6*	—	—	*0.5*	*1.4*	*0.8*	*3.8*	*1.7*	*6.7*
Banks and others	—	—	—	2.0	1.6	—	—	0.5	1.4	0.8	3.8	1.7	6.7

Source: Table 22.

Note: Details may not add up to totals due to rounding. *Less than 0.05%.

VOLUME OF CONSUMPTION[1]—1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Annual averages 1940 to 1945	1946 to 1950	1940 to 1950
Volume of Consumption															
(Index 1939=100)	100.0	100.5	117.9	130.8	135.6	151.3	161.5	177.4	175.9	180.9	186.5	205.3			
Annual rate of increase (%)	—	0.5	17.3	10.9	3.7	11.6	6.7	9.8	—0.9	2.8	3.1	10.1	8.3	4.9	6.8
Volume of Consumption per capita															
(Index 1939=100)	100.0	99.3	113.3	122.9	124.4	135.6	141.0	151.2	145.7	145.5	145.8	155.2			
Annual rate of increase (%)	—	—0.7	14.1	8.5	1.2	9.0	4.0	7.2	—3.8	—0.1	0.2	6.4	5.9	2.0	4.1

Source: Combined Mexican Working Party.

[1] Estimated on the assumption that the ratio between the value of consumption and its volume is the same as the ratio between net domestic product at factor cost and real net domestic product at factor cost (cf. Tables 2, 5 and 12).

TABLE 25

VOLUME OF INVESTMENT[1]—1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Annual rates of increase 1940 to 1945	1946 to 1950	1940 to 1950
Gross Domestic Investment															
Index (1939=100)	100.0	116.2	136.8	128.4	135.1	149.4	176.5	219.6	261.0	269.8	276.8	294.0			
Annual rate of increase (%)	—	16.2	17.7	—6.1	5.2	10.6	18.1	24.6	18.9	3.4	2.6	6.2	9.9	10.8	10.3
Gross Public Investment															
Index (1939=100)	100.0	125.5	133.6	160.9	171.1	161.4	188.6	195.1	229.6	253.8	287.7	342.9			
Annual rate of increase (%)	—	25.5	6.5	20.4	6.3	—5.7	16.2	3.5	17.7	10.5	13.4	19.2	11.2	12.7	11.8
Gross Private Investment															
Index (1939=100)	100.0	111.1	138.7	108.3	112.8	141.9	169.0	234.8	280.3	279.6	270.1	263.8			
Annual rate of increase (%)	—	11.1	24.8	—21.9	4.2	25.8	19.1	39.0	19.4	—0.3	—3.5	—2.4	9.1	9.3	9.2

Source: Combined Mexican Working Party.

[1] Estimated by deflating investment at current prices with the Bank of Mexico wholesale price index (210 commodities).

TABLE 26

INVESTMENT-OUTPUT RATIOS

	I. Gross domestic Investment (Millions of pesos at 1939 prices)[1]	II. Increase in real net domestic product (Millions of pesos at 1939 prices)[2]	Investment-Output Ratios $\frac{I}{II}$	Investment Yields $\frac{II}{I}$
1939	649			
1940	754	93.2	8.09	0.12
1941	888	768.8	1.15	0.87
1942	833	926.0	0.90	1.11
1943	877	326.1	2.69	0.37
1944	970	722.2	1.34	0.74
1945	1,145	710.5	1.61	0.62
1946	1,425	675.6	2.11	0.47
1947	1,694	180.5	9.38	0.11
1948	1,751	518.4	3.38	0.30
1949	1,796	518.3	3.46	0.29
1950	1,908	1,223.1	1.56	0.64
1940/45	5,467	3,546.8	1.54	0.65
1946/50	8,574	3,115.9	2.75	0.36
1940/50	14,041	6,662.7	2.11	0.47

Source: Combined Mexican Working Party.

[1] cf. Tables 12 and 25.

[2] cf. Tables 2 and 5.

TABLE 27

GROSS DOMESTIC INVESTMENT, INCREASE IN FOREIGN MONETARY RESERVES AND THEIR FINANCING, 1939-1950

	1939/45 Millions of pesos	%	1946-50 Millions of pesos	%	1939/50 Millions of pesos	%
Domestic investment and increase in monetary reserves	**10,290**	**100.0**	**23,449**	**100.0**	**33,739**	**100.0**
Gross domestic investment	*8,680*	*84.4*	*22,971*	*98.0*	*31,651*	*93.8*
Increase in monetary reserves	*1,610*	*15.6*	*478*	*2.0*	*2,088*	*6.2*
Financing of domestic investment and increase in monetary reserves	**10,290**	**100.0**	**23,449**	**100.0**	**33,739**	**100.0**
Savings	*8,659*	*84.1*	*21,248*	*90.6*	*29,907*	*88.6*
(=gross national investment)						
Public	2,887	28.1	7,541	32.2	10,428	31.0
Private	5,772	56.0	13,707	58.4	19,479	57.6
Increase in foreign obligations	*668*	*6.5*	*634*	*2.7*	*1,302*	*3.9*
Long term	486	4.7	830	3.5	1,316	3.9
(Official)	(—164)	(—1.6)	(193)	(.8)	(29)	(0.1)
(Private)	(650)	(6.3)	(637)	(2.7)	(1,287)	(3.8)
Short term	182	1.8	—196	—.8	—14	0.0
Statistical discrepancy (=errors and omissions in balance of payments)	*963*	*9.4*	*1,567*	*6.7*	*2,530*	*7.5*

Source: Tables 12 and 122.

TABLE 28

Propensities to Save, 1940-1950

(Percentages)

	1940-43	1944-46	1947-50	1940-50
Average propensity to save[1]	*10.4*	*9.3*	*13.4*	*11.9*
Private	7.0	5.7	8.8	7.7
Public	3.4	3.6	4.6	4.2
Marginal propensity to save[1]	*10.4*	*6.0*	*26.3*	*15.6*
Private	6.0	2.4	18.3	10.0
Public	4.4	3.6	8.0	5.6

Source: Table 12.

[1] The average propensity to save is found as the ratio between savings (gross national investment) and gross national product; the marginal propensity to save as the ratio between the increase in savings and in gross national product.

TABLE 29

AGRICULTURE

Gross Investment and Financing, 1939-1950

(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
I. *GROSS INVESTMENT*	*86.2*	*101.3*	*124.9*	*120.4*	*164.6*	*232.4*	*251.6*	*330.6*	*474.3*	*862.2*	*1,104.3*	*1,157.7*
Public investment[1]	*39.7*	*44.3*	*58.7*	*65.2*	*86.0*	*124.8*	*148.0*	*195.4*	*266.1*	*324.1*	*504.2*	*551.8*
Agricultural development	1.3	1.2	1.2	1.7	2.2	6.1	5.0	3.3	10.5	10.0	7.2	12.4
Conservation of resources	0.3	6.8	0.8	0.5	0.8	0.2	1.0	0.8	1.4	4.2	1.5	2.6
Campaign against foot-and-mouth disease	—	—	—	—	—	—	—	—	24.9	60.3	194.2	134.2
Irrigation	38.1	36.3	56.7	63.0	83.0	117.1	139.6	189.0	228.3	249.3	260.7	371.9
Fertilizer industry	—	—	—	—	—	1.4	2.4	2.3	1.0	0.3	40.6	30.7
Private investment	*46.5*	*57.0*	*66.2*	*55.2*	*78.6*	*107.6*	*103.6*	*135.2*	*208.2*	*538.1*	*600.1*	*605.9*
Machinery and implements[2]	10.4	12.7	26.3	16.3	24.7	40.4	39.5	59.0	89.5	166.5	205.5	221.4
Land clearing[3]	6.9	4.8	2.7	5.0	13.7	13.8	27.2	23.3	39.2	105.3	97.7	54.3
Small scale irrigation[3]	—	2.9	1.8	2.6	2.6	3.2	2.9	7.1	36.3	72.0	130.5	159.6
Livestock[4]	14.0	19.0	25.0	19.0	26.0	35.0	19.0	30.0	16.0	92.0	81.0	81.0
Miscellaneous[3]	15.2	17.6	10.4	12.3	11.6	15.2	15.0	15.8	27.2	102.3	85.4	89.6
Investment ratios												
Agricultural investment in relation to total gross investment (%)	*13.3*	*13.1*	*12.9*	*12.0*	*12.9*	*13.4*	*11.1*	*10.1*	*11.6*	*18.9*	*21.6*	*19.5*
Public agricultural investment in relation to total public investment (%)	*16.0*	*14.0*	*16.2*	*13.6*	*13.9*	*17.5*	*15.9*	*17.7*	*19.3*	*19.8*	*24.8*	*20.9*
Private agricultural investment in relation to total private investment (%)	*11.6*	*12.5*	*10.9*	*10.5*	*11.9*	*10.6*	*7.7*	*6.3*	*7.6*	*18.4*	*19.4*	*18.4*
II. *FINANCING*	*86.2*	*101.3*	*124.9*	*120.4*	*164.6*	*232.4*	*251.6*	*330.6*	*474.3*	*862.2*	*1,104.3*	*1,157.7*
Public—investment[5]	*39.7*	*44.3*	*58.7*	*65.2*	*86.0*	*124.8*	*148.0*	*195.4*	*266.1*	*324.1*	*504.2*	*551.8*
Internal financing	*39.7*	*44.3*	*58.7*	*65.2*	*86.0*	*124.8*	*148.0*	*195.4*	*249.8*	*276.1*	*320.9*	*414.5*
Federal Government	42.8	38.5	51.9	68.8	83.3	110.5	156.6	198.4	230.7	249.7	285.1	322.6
State Governments	—	—	—	—	—	—	—	—	6.0	8.1	6.2	5.0
Government banks	—	—	0.2	—	—	3.9	4.2	2.8	1.4	—	1.3	4.9
Resources of public agencies	—	—	—	—	—	—	—	—	0.2	—	18.7	7.3
Private contributions	—	—	—	—	—	—	—	—	—	—	21.3	47.7
Adjustments[6]	—3.1	5.8	6.6	—3.6	2.7	10.4	—12.8	—5.8	11.5	18.3	—11.7	27.0
External financing	—	—	—	—	—	—	—	—	*16.3*	*48.0*	*183.3*	*137.3*
Public institutions	—	—	—	—	—	—	—	—	16.3	48.0	183.2	125.3
Private credit (banks)	—	—	—	—	—	—	—	—	—	—	0.1	12.0
Private investment	*46.5*	*57.0*	*66.2*	*55.2*	*78.6*	*107.6*	*103.6*	*135.2*	*208.2*	*538.1*	*600.1*	*605.9*
Internal financing	*46.5*	*57.0*	*66.2*	*55.2*	*78.6*	*107.6*	*103.6*	*135.2*	*194.9*	*461.7*	*557.3*	*605.9*
Federal Government[7]	—	—	—	—	—	—	—	—	2.6	14.8	6.3	—
Government banks[8]	8.7	9.3	8.4	9.7	12.9	15.6	20.5	20.7	44.9	120.2	141.9	163.5
Resources of public agencies[7]	—	—	—	—	—	—	—	—	0.1	0.8	0.3	–

Private credit institutions and other private sources	37.8	47.7	57.8	45.5	65.7	92.0	83.1	114.5	147.3	325.9	408.8	442.4
External financing	—	—	—	—	—	—	—	—	*13.3*	*76.4*	*42.8*	—
Public institutions[7]	—	—	—	—	—	—	—	—	13.3	76.4	42.8	—
Summary	*86.2*	*101.3*	*124.9*	*120.4*	*164.6*	*232.4*	*251.6*	*330.6*	*474.3*	*862.2*	*1,104.3*	*1,157.7*
Internal financing	*86.2*	*101.3*	*124.9*	*120.4*	*164.6*	*232.4*	*251.6*	*330.6*	*444.7*	*737.8*	*878.2*	*1,020.4*
Public sources	*51.5*	*47.8*	*60.5*	*78.5*	*96.2*	*130.0*	*181.3*	*221.9*	*285.9*	*393.6*	*459.8*	*503.3*
Federal Government	42.8	38.5	51.9	68.8	83.3	110.5	156.6	198.4	233.3	264.5	291.4	322.6
State Governments	—	—	—	—	—	—	—	—	6.0	8.1	6.2	5.0
Government banks	8.7	9.3	8.6	9.7	12.9	19.5	24.7	23.5	46.3	120.2	143.2	168.4
Resources of public agencies	—	—	—	—	—	—	—	—	0.3	0.8	19.0	7.3
Private sources	*37.8*	*47.7*	*57.8*	*45.5*	*65.7*	*92.0*	*83.1*	*114.5*	*147.3*	*325.9*	*430.1*	*490.1*
Contribution to public investment	—	—	—	—	—	—	—	—	—	—	21.3	47.7
Financing of private investment	37.8	47.7	57.8	45.5	65.7	92.0	83.1	114.5	147.3	325.9	408.8	442.4
Adjustments[6]	*—3.1*	*5.8*	*6.6*	*—3.6*	*2.7*	*10.4*	*—12.8*	*—5.8*	*11.5*	*18.3*	*—11.7*	*27.0*
External financing	—	—	—	—	—	—	—	—	*29.6*	*124.4*	*226.1*	*137.3*
Public institutions	—	—	—	—	—	—	—	—	29.6	124.4	226.0	125.3
Private credit (banks)	—	—	—	—	—	—	—	—	—	—	0.1	12.0

Source: Shown in footnotes.

[1] Cf. table 19.

[2] For 1940-1949, imports of agricultural machinery, including imports through free ports, according to an ECLA report "Economic Survey of Latin America 1950, Recent Developments and Trends in the Mexican Economy," (E/CN.12/217/Add.8), March 26, 1951, p. 47. For 1939 and 1950, imports of agricultural machinery according to Comercio Exterior de México. In order to arrive at an estimate of the investment in agricultural machinery, the value of imports was increased by 35% to allow for import duties, transportation costs, costs of distribution and, for some machinery, costs of assembling. No estimate is available on the value of agricultural machinery and implements produced in Mexico and such production has not been taken into account. However, such machinery is mostly assembled in Mexico and the parts are included in imports. Exports of agricultural machinery, which are of very minor importance, have not been taken into account.

[3] Estimated on the basis of loans granted by the three Government banks, the National Ejidal Credit Bank, the National Agricultural Credit Bank, and the National Foreign Trade Bank, for land clearing, small scale irrigation and other investment purposes, excluding purchases of machinery. It has been assumed that loans of this kind made by the three banks represent roughly one-third of total investment in each field. For the years 1939 to 1947, only the total amount of refaccionario-loans made by the National Ejidal Credit Bank, has been available without details. It has been assumed that the division of these loans into groups was similar to that of the National Agricultural Credit Bank for corresponding years. The item "miscellaneous" covers mainly investments in plants for the processing of agricultural products, including cotton gins, rice mills, pineapple canneries, etc.

[4] Estimated by Nacional Financiera.

[5] Cf. table 21.

[6] The adjustments represent the difference between investment and identifiable financing. This difference is found principally between investment and identifiable financing of the Ministry of Hydraulic Resources. Cf. footnote 14 in table 38.

[7] During the years 1947-1949 the Mexican-U.S. Commission for the Eradication of the Foot-and-Mouth Disease paid indemnities for slaughtered animals amounting to 147 million pesos. It has been assumed that all these indemnities were used for investment in livestock and that, consequently, the gross investment in livestock in 1947 and 1948 was entirely financed by these means and in 1949 approximately one-half of the total investment in livestock came from this source. It has been assumed furthermore that these funds come from the Mexican Government, the U.S. Government and from miscellaneous income of the Commission in the same proportions as the total funds of the Commission. For 1949 the external financing also includes a loan of 10.4 million pesos from the Export-Import Bank for the purchase of agricultural machinery administered through the National Ejidal Credit Bank.

[8] Includes *refaccionario* loans granted by the National Ejidal Credit Bank, the National Agricultural Credit Bank, and the National Foreign Trade Bank. In the case of the latter bank, the amount of *refaccionario* loans granted through the National Ejidal Credit Bank has been subtracted.

TABLE 30

AGRICULTURE

Banco Nacional de Crédito Agrícola y Ganadero
(National Agricultural and Livestock Credit Bank)
Loans Disbursed[1]
(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
AVIO LOANS[2]	*5.1*	*4.8*	*5.0*	*8.0*	*10.0*	*15.1*[3]	*17.2*[3]	*18.0*[3]	*30.9*	*41.5*	*61.7*	*
Sesame	—	—	—	0.3	0.2	0.3	0.6	0.1	0.5	1.6	1.3	
Cotton	2.5	2.3	3.2	5.4	6.9	6.5	5.6	4.6	14.8	16.1	36.4	
Rice	—	0.1	—	0.1	0.2	0.7	1.0	0.8	1.1	2.0	1.6	
Beans	0.1	0.1	0.1	—	0.1	0.1	0.2	0.1	0.4	1.1	1.9	
Corn	0.5	0.5	0.4	0.4	0.4	1.6	2.0	2.0	3.4	5.5	8.1	
Potatoes	—	—	—	0.1	0.3	0.4	0.5	1.0	1.0	0.8	0.9	
Wheat	1.2	0.9	0.2	0.2	0.1	0.7	1.0	1.0	6.9	8.9	7.7	
Miscellaneous	0.8	0.9	1.1	1.5	1.6	2.8	4.2	4.1	2.9	5.5	3.8	
REFACCIONARIO LOANS[4]	*1.1*	*1.4*	*1.5*	*2.1*	*3.8*	*5.5*	*7.8*	*7.2*	*21.6*[5]	*73.7*[6]	*85.7*[6]	*75.0*[6]
Land clearing	0.3	0.2	0.2	0.4	1.3	1.7	3.7	2.6	6.5	33.4	26.5	10.5
Agricultural machinery and implements	0.2	0.1	0.6	0.7	1.0	1.5	2.1	1.9	5.7	12.0	28.8	30.7
Drilling of wells and pumping equipment	—	0.1	0.1	0.2	0.3	0.4	0.4	0.9	6.7	23.8	26.1	33.7
Miscellaneous	0.6	0.9	0.6	0.9	1.1	1.9	1.7	1.9	2.7	4.4	4.3	
OTHER AGRICULTURAL LOANS[7]	*0.1*	*0.1*	—	*0.1*	*0.2*	*1.3*	*2.9*	*6.3*	*1.3*	*0.1*	*14.2*[8]	
TOTAL	**6.3**	**6.3**	**6.6**	**10.2**	**14.0**	**21.9**	**27.9**	**31.6**	**61.0**	**115.3**	**161.6**	**175.8**
COMMERCIAL LOANS[9]	—	—	—	*42.8*	*94.2*	*89.5*	*95.3*	*107.6*	*56.2*	*13.6*	*0.9*	—
GRAND TOTAL	**6.3**	**6.3**	**6.6**	**53.0**	**108.2**	**111.4**	**123.2**	**139.2**	**117.2**	**128.9**	**162.5**	**175.8**

Sources: National Agricultural and Livestock Credit Bank, Annual Reports, 1939-1949, *Veinticinco Años del Banco Nacional Agrícola y Ganadero, S.A.*, and information supplied by the Bank to the Combined Mexican Working Party; Manuel Mesa Andraca and Emilio Alanís Patiño, "*La Agricultura en México*," *Problemas Agrícolas e Industriales de México*, Vol. III, No. 1, 1951, pp. 78-79.

NOTE: Items may not add up to totals because of rounding.

*Not available.

[1] Loans disbursed during the calendar year.

[2] *Avío* loans are short-term loans that may run for 18 months but are usually for 12 months, and are intended for the purchase of raw and other materials, payments of wages, salaries and other direct production expenditures.

[3] In the years 1944 to 1946, the classification by crops does not add up to the total of *avío* loans since that classification includes only loans to societies and private individuals and not those made to credit unions, banks, financial companies and other borrowers. The difference amounts to 2 million pesos in 1944 and 1945 and 4.2 million pesos in 1946. The breakdown of these loans is not available.

[4] *Refaccionario* loans are for periods of one to five years and are intended for the purchase of farm implements, appliances, tools for tillage, fertilizers, cattle or breeding animals; for planting of seasonal or permanent crops, leveling of land, farm cultivation, purchase or installation of machinery and essential construction work, etc.

[5] A *refaccionario* loan of 7,185,000 pesos to the Irrigadora del Yaqui, S.A. has not been included, because this loan was actually made in 1943, although not as an agricultural loan at that time. The classification as between land clearing and drilling of wells is somewhat arbitrary for 1947, as an amount of 5,460,000 pesos granted to the Financiera de las Huastecas for both these purposes jointly has arbitrarily been assumed to be for land clearing to the amount of 3 million pesos, making the total loans for the purpose of land clearing equal to the amount given in *Veinticinco Años.*

[6] The information in *Veinticinco Años* does not conform with the figures from the annual reports. *Veinticinco Años* has the following data (millions of pesos):

	1947	*1948*	*1949*
Land clearing	6.5	16.4	26.5
Machinery	10.3	28.6	29.3
Drilling of wells and pumping equipment	6.7	23.2	23.8
	23.5	68.3	79.6

An explanation of these discrepancies has not been available from the National Agricultural and Livestock Credit Bank. The figures for 1950 are from the *Veinticinco Años.*

[7] The main item is collateral loans, but long term real property loans for the purchase of land are also included.

[8] Of this comparatively high amount, 13.3 million pesos are classified by the Bank as loans in process of documentation as of December 31, 1949. No further breakdown of this item is available.

[9] Loans made on warehouse receipts for a maximum of six months, but usually not exceeding 3 months. The amount of loans disbursed during the year is consequently much higher than the amounts of funds actually engaged in these operations. In 1946, e.g., the monthly balance of these loans never exceeded 20 million pesos. These loans were made to merchants, and to farmers' cooperatives to a minor extent. From 1947 onwards, the policy of the Bank has been to withdraw gradually from this kind of operation.

TABLE 31

AGRICULTURE

Banco Nacional de Crédito Ejidal
(National Ejidal Credit Bank)
Loans granted, 1938-1951/52
(Millions of pesos)

	1938	1939	1940	1941	1942	1943	1944	1945 1946	1946 1947	1947 1948	1948 1949	1949 1950	1950 1951	1951 1952
TOTAL LOANS GRANTED	*53.9*	*60.8*	*56.4*	*56.1*	*73.7*	*77.7*	*91.9*	*91.5*	*111.8*	*206.2*	*225.2*	*245.8*	*322.0*	*321.0*
I. *"Avío" loans*[1]	*53.9*	*60.8*	*56.4*	*56.1*	*57.5*	*77.7*	*91.9*	*91.5*	*111.8*	*178.7*	*178.9*	*183.4*	*228.6*	*321.0*
Sesame	1.0	0.5	0.4	0.8	1.4	2.7	1.0	1.7	3.9	6.7	9.6	8.4	5.8	
Cotton	16.4	16.4	13.1	13.3	16.2	28.0	35.1	28.1	27.5	56.8	44.4	48.6	69.4	
Rice	1.8	2.6	3.5	3.2	4.6	4.4	8.2	10.7	16.8	12.7	15.3	18.0	20.1	
Peanuts	0.2	0.2	0.2	0.6	0.8	1.4	1.1	0.4	1.0	1.0	1.4	1.9	2.2	
Coffee	0.5	1.1	1.7	1.9	1.7	2.1	2.5	3.1	3.5	4.4	7.7	5.6	5.1	
Sugar cane	2.5	2.5	6.6	7.2	7.2	8.0	8.6	8.9	11.7	18.7	9.4	6.0	5.8	
Chili	0.3	0.3	0.3	—	0.4	0.5	0.8	3.1	2.7	3.0	0.9	1.0	2.1	
Beans	1.4	1.6	0.8	0.9	0.8	0.8	1.2	0.7	2.9	3.9	5.1	5.1	5.2	
Chickpea	1.6	1.0	0.9	0.9	1.6	1.0	0.9	1.4	2.0	2.6	4.5	2.6	1.1	
Corn	10.0	14.2	11.8	12.3	10.1	12.5	16.1	13.4	13.6	25.1	37.7	39.3	49.8	
Banana	0.4	1.6	1.2	1.3	0.6	1.5	0.7	0.5	0.6	1.1	0.1	1.2	1.2	
Wheat	14.3	16.4	14.3	12.7	10.0	11.0	12.1	12.5	19.2	36.2	37.7	39.9	55.8	
Miscellaneous products	3.5	2.4	1.6	1.0	2.1	3.8	3.6	7.0	6.4	6.5	5.1	5.8	5.0	
II. *"Refaccionario" loans*[2]	*	*	*	*	*16.2*	*	*	*	*	*27.5*	*46.3*	*62.4*	*93.4*	*
Clearing of land					*					—	3.1	5.2	19.8	
Agricultural machinery					16.2					11.2	17.9	29.5	19.6	
Small scale irrigation					*					0.1	17.4	19.5	44.0	
Industries					*					16.2	7.9	8.2	10.0	

Sources: For 1938-1944, M. Mesa Andraca and E. Alanís Patiño, "La Agricultura en México," Problemas Agrícolas e Industriales de México, Vol. IV, No. 1, p. 80; for 1945/46–1949/50, National Ejidal Credit Bank, report for 1949; for 1950/51–1951/52, information supplied by the Bank to the Combined Mexican Working Party.

*Not available.

[1]"Avío" loans are short-term loans that may run for 18 months but are usually for 12 months or less, and are intended for the purchase of raw and other materials, payment of wages, salaries and other direct production expenditures. For 1938-1944, these figures refer to "avío" loans granted during the calendar year, excluding loans granted from trust accounts (fideicomisos); the totals are consequently the same as the totals for "avío" loans in table 32 (with the exception of the year 1939 for unknown reasons). The breakdown according to crops, which also is to be found in Gontrán Noble, "El Crédito Agrícola en México," is based on a special investigation and comparable figures are not available for later years. The figures for 1945/46–1951/52 refer to loans authorized and not to loans actually disbursed. The differences between authorizations and disbursements, however, are not usually great. The "avío" loans correspond to the crop cycle, e.g., loans authorized in 1948/49 are for crops sown in 1948, the cultivation of which extends into 1949 in some cases. The authorizations include loans from trust accounts. For these various reasons the figures for 1938-1944 and for 1945/46–1951/52 are not comparable.

[2]"Refaccionario" loans are for periods of one to five years and are intended for the purchase of farm implements, appliances, tools for tillage, fertilizers, cattle or breeding animals; for the planting of seasonal or permanent crops, for the leveling of land for farm cultivation, purchase or installations of machinery and essential construction work, etc. The "refaccionario" loans correspond to authorizations made in the calendar year first mentioned, e.g., under the heading 1948/49 are entered authorizations made in the calendar year 1948. There might be some duplication between years. No breakdown of these loans is available for 1938 to 1946/47, except the amount of loans for agricultural machinery in 1942.

TABLE 32

AGRICULTURE

Banco Nacional de Crédito Ejidal

(National Ejidal Credit Bank)

Annual loan disbursements, 1939-1950

(millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
TOTAL LOAN DISBURSEMENTS[1]	*64.1*	*65.6*	*63.8*	*67.8*	*103.3*	*108.4*	*108.8*	*131.2*	*180.3*	*186.1*	*217.6*	*296.0*
"Avío" loans	52.6	56.4	56.1	57.5	77.7	91.9	91.2	109.1	153.5	168.4	167.3	179.2
"Refaccionario" loans	7.6	7.9	6.9	7.5	8.7	8.9	10.9	12.1	17.3	12.4	28.6	11.7[2]
Other	3.9	1.3	0.8	2.8	16.9	7.6	6.7	10.0	8.5	4.3	6.9	5.6
Loan disbursements from trust accounts	—	—	—	—	—	—	—	—	1.0	1.0	14.8	99.5

Source: National Ejidal Credit Bank, annual reports; data for 1950 and for disbursements from trust accounts supplied by the Bank to the Combined Mexican Working Party.

[1]Figures refer to actual disbursements of loans during the calendar year. Disbursements from trust accounts ("fideicomisos") are shown as separate items (see table 37).

[2]In 1951, "refaccionario" loans were to increase up to about 60 million pesos.

TABLE 33

AGRICULTURE

National Foreign Trade Bank, 1943-1950
(Banco Nacional de Comercio Exterior)
(millions of pesos)

	1943	1944	1945	1946	1947	1948	1949[6]	1950[6]
I. *AGRICULTURAL PRODUCTION LOANS*[1]	*15.6*	*24.2*	*38.9*	*42.0*	*48.9*	*73.4*	*62.0*	*48.5*
Crop loans	*15.1*	*18.8*	*29.7*	*28.8*	*36.9*	*45.5*	*36.8*	*19.4*
Sesame	0.2	0.3	0.3	—	0.2	0.2	0.3	0.3
Cotton	0.5	0.6	0.5	0.8	0.1	0.2	2.5	4.3
Rice	—	—	—	0.2	—	—	0.4	1.2
Peanuts	0.4	—	—	—	—	0.3	—	—
Coffee	8.4	11.2	11.1	11.3	11.4	11.7	12.1	7.0
Sugar cane	1.5	1.2	1.6	1.4	4.0	6.4	4.7	2.3
Chicle	—	—	—	—	4.4	14.3	11.7	—
Peppers	—	—	—	0.4	2.1	1.6	1.5	0.5
Beans	—	0.1	0.1	0.1	0.2	0.3	0.1	0.1
Chickpeas	0.2	0.4	1.0	1.2	0.3	—	—	—
Corn	—	0.1	0.7	—	0.4	0.4	0.3	0.4
Pineapple	0.2	0.5	1.0	1.2	1.7	1.4	2.4	2.3
Banana	3.6	4.2	10.9	4.1	3.4	5.6	0.8	1.0
Wheat	—	—	—	—	—	—	—	—
Wheat and cotton	—	—	—	0.1	—	—	—	—
Miscellaneous products	0.1	0.2	2.5	8.0	8.7	3.1	—	—
"Refaccionario" loans	*0.5*	*1.1*	*1.9*	*1.4*	*5.9*	*19.0*	*20.3*	*26.1*
Agricultural machinery	0.4	0.9	0.6	0.4	0.4	3.8	1.2	2.1
Clearing and preparation of land for planting	0.1	0.2	0.3	0.8	1.3	1.7	2.9	2.4
Ships	—	—	1.0	0.2	0.5	2.0	1.5	0.3
Pineapple packing plants	—	—	—	—	3.7	11.5	14.7	21.3
Other items	—	*4.3*	*7.3*	*11.8*	*6.1*	*8.9*	*4.9*	*3.0*

II. *FINANCING*	*41.08*	*237.74*	*—6.54*	*12.94*	*58.59*	*—24.09*	*—150.57*	*17.90*
Increase in paid-in capital[2]	*—0.02*	*0.50*	*0.52*	*0.53*	—	—	*12.47*	*12.48*
Federal Government	—	0.17	0.18	0.18	—	—	12.47	12.48
Bank of Mexico	—	—	—	—	0.96	0.97	—	—
Nacional Financiera	*—0.04*	—	—	—	—	—	—	—
National Public Works Bank	—	0.09	0.10	0.10	—	—	—	—
National Agricultural Credit Bank	—	0.17	0.17	0.17	—0.96	—0.97	—	—
Compañía Exportadora e Importadora (CEIMSA)[3]	0.05	0.03	0.03	0.03	—	—	—	—
Private agencies	—0.03	0.04	0.04	0.05	—	—	—	—
Increase of reserves[4]	*2.04*	*3.96*	*5.24*	*4.71*	*4.85*	*6.00*	*106.34*	*7.68*
Increase in loans from the Bank of Mexico[5]	*39.06*	*233.28*	*—12.30*	*7.70*	*53.74*	*—30.09*	*—269.38*	*—2.26*

Source: National Foreign Trade Bank.

[1] Annual disbursements. Agricultural production loans were not separated in the accounts before 1943. Such loans are made through other banks, through credit unions or directly to the producers. The loans made through the National Ejidal Credit Bank, which are included in table 31 have been excluded from the data in this table.

[2] Figures for the increase in capital have been available only for the periods 1941-43, 1944-46, 1947-48 and 1949-50. It has been assumed that the increase in capital was divided evenly between years in each of these periods.

[3] Government trading agency.

[4] The increase in reserves originates in profits of the Bank, with the exception of pesos 100.1 million in 1949 which represents a grant from the Federal Government.

[5] Information supplied to the Combined Mexican Working Party by the Bank of Mexico. The figures represent changes in the balance outstanding at the end of each year.

[6] In 1949-50, the Federal Government assumed debts created through rediscount operations of the National Foreign Trade Bank with the Bank of Mexico. In exchange, the Government received shares from the National Foreign Trade Bank for only a part of the amount of the assumed indebtedness, and gave the rest as a grant with which a special capital reserve of 100.1 million pesos was established. This operation accounts for the entire increase in paid-in capital in 1949-50. The paper rediscounted with the Bank of Mexico was returned to the National Foreign Trade Bank, and will gradually provide increased financial resources as borrowers redeem the paper held by the Bank.

TABLE 34

AGRICULTURE

Agricultural Credit: Crop Credit and Investment Credit of Government ana Private Banks 1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Averages 1939-1942	Averages 1943-1946	Averages 1947-1950
CROP CREDIT (millions of pesos)															
Government and private Banks	*	*	*	*125.4*	*177.6*	*218.4*	*250.5*	*260.0*	*321.3*	*381.4*	*423.9*	*545.0*			
Government Banks	*57.7*	*61.2*	*61.2*	*65.5*	*102.8*	*125.8*	*138.2*	*155.9*	*221.3*	*255.4*	*281.9*	*338.0*			
National Ejidal Credit Bank[1]	52.6	56.4	56.1	57.5	77.7	91.9	91.3	109.1	153.5	168.4	183.4	228.6			
National Agricultural Credit Bank[2]	5.1	4.8	5.1	8.0	10.0	15.1	17.2	18.0	30.9	41.5	61.7	90.0[4]			
National Foreign Trade Bank[3]	—	—	—	—	15.1	18.8	29.7	28.8	36.9	45.5	36.8	19.4			
Deposits and savings banks[5]	*	*	*	*59.9*	*74.8*	*92.6*	*112.3*	*104.1*	*100.0*	*126.0*	*142.0*	*207.0*			
CROP CREDIT IN RELATION TO VALUE OF AGRICULTURAL PRODUCTION (Percentages)[6]															
Government and private banks	*	*	*	*8.5*	*9.7*	*8.6*	*8.8*	*7.6*	*8.0*	*8.3*	*8.5*	*8.2*	*	*8.7*	*8.3*
Government banks	5.9	6.8	5.3	4.4	5.6	4.9	4.8	4.6	5.5	5.5	5.6	5.1	5.6	5.0	5.4
Private banks	*	*	*	4.1	4.1	3.6	3.9	3.1	2.5	2.7	2.8	3.1	*	3.7	2.8

INVESTMENT CREDIT (millions of pesos)												
Government banks	*8.7*	*9.3*	*8.4*	*9.6*	*13.0*	*15.5*	*20.6*	*20.7*	*44.8*	*105.1*	*168.4*	*194.5*
National Ejidal Credit Bank[7]	7.6	7.9	6.9	7.5	8.7	8.9	10.9	12.1	17.3	12.4	62.4	93.4
National Agricultural Credit Bank[8]	1.1	1.4	1.5	2.1	3.8	5.5	7.8	7.2	21.6	73.7	85.7	75.0
National Foreign Trade Bank[9]	—	—	—	—	0.5	1.1	1.9	1.4	5.9	19.0	20.3	26.1

Sources: For Government banks, tables 30, 31, 32 and 33. For private banks, annual reports of the Bank of Mexico.

[1] For 1939 to 1948, *Avío* loans disbursed during the calendar year; for 1949 and 1950, *avío* loans authorized for the agricultural cycle 1949/50 and 1950/51 respectively. (cf. Table 31. Footnote 1.)

[2] *Avío* loans disbursed during the calendar year.

[3] *Avío* loans disbursed during the calendar year, excluding loans granted through the National Ejidal Credit Bank.

[4] Rough estimate.

[5] Includes deposit and savings banks. No information is available for *financieras* and banks of capitalization. For 1942-47, the figures represent annual average of balances outstanding at the end of each month. For 1948-50, they represent balances outstanding at end of year. Only agricultural loans are included and not loans for cattle raising, forestry and fisheries. For 1948-50, unclassified loans belonging to the group: agriculture, cattle raising, forestry and fisheries have, however, been included, as those loans must be mainly agricultural. All agricultural loans made by private banks have been regarded as crop loans. Sugar cultivation is mainly financed through the National Union of Sugar Producers (Unión Nacional de Productores de Azúcar). Since the Union mainly derives its funds from private banks, where these loans are classified as agricultural loans, the loans granted by the Union are not included here.

[6] Value of agricultural production used for the computation of these ratios according to the Bank of Mexico. The figure for 1950 is a preliminary estimate.

[7] For 1939-48, *refaccionario* loans disbursed during the calendar year; for 1949-50, *refaccionario* loans authorized. (cf. Table 31. Footnote 2.)

[8] *Refaccionario* loans disbursed during the calendar year.

[9] *Refaccionario* loans disbursed during the calendar year, excluding loans granted through the National Ejidal Credit Bank.

*Not available.

TABLE 35

AGRICULTURE

Agricultural Credit: Distribution of Crop Credit, Government Banks, 1939-1950

(percentages)

	Average 1939-1942	Average 1943-1946	Average 1947-1950
DISTRIBUTION OF CROP CREDIT BETWEEN MAIN GROUPS OF CROPS[1]	*100.0*	*100.0*	*100.0*
Export crops[2]	38.4	52.1	43.9
Domestically consumed food crops[3]	52.9	32.8	41.4
Other crops	8.7	15.1	14.7
	Average 1939-1942	**Average 1943-1946**	**Average 1947-1949**
CROP CREDIT IN RELATION TO VALUE OF AGRICULTURAL PRODUCTION FOR MAIN GROUPS OF CROPS[1]			
Export crops[2]	16.6	20.6	17.1
Domestically consumed food crops[3]	6.6	3.8	5.6
Other crops	1.3	1.7	2.4

Source: Tables 30, 31 and 33.

[1] Includes *avío* loans disbursed by the three government banks granting agricultural loans, the National Ejidal Credit Bank, the National Agricultural Credit Bank and the National Foreign Trade Bank. Since figures on the distribution of loans disbursed by the National Agricultural Credit Bank in 1950 were unavailable, it was assumed that this distribution was similar for the year 1950 as for 1949.

[2] Includes rice, cotton, coffee and bananas.

[3] Includes corn, beans, wheat and sugar cane.

TABLE 36

AGRICULTURE

Banco Nacional de Crédito Agrícola y Ganadero
(National Agricultural and Livestock Credit Bank)
Financing, 1926-38 and 1939 to 1950
(Millions of pesos)

	1926-1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1926-1950
I. *INCREASE IN PAID-IN CAPITAL*	*30.5*[1]	*1.1*[2]	*0.7*	*3.1*	*5.6*	*2.8*[2]	*4.3*	*3.7*	*5.6*	*10.5*	*11.2*	*131.3*[3]	*11.5*	*211.9*[1]
Federal Government	24.8	1.0	0.6	3.0	5.4	2.8	3.9	3.4	5.3	9.8	9.9	129.7	10.0	199.7
State Governments	0.2	—	—	—	—		—	—	—	—	—	—	—	0.2
Banks[4]	5.4	0.1	0.1	0.1	0.2		0.4	0.3	0.3	0.7	1.3	1.6	1.5	12.0
II. *INCREASE IN LOAN FUNDS AVAILABLE*[5]	*22.6*	*—4.1*	*—3.6*	*—5.5*	*13.8*	*2.6*	*—1.9*	*8.5*	*—4.0*	*11.5*	*59.6*	*—54.7*	*36.3*	*81.1*
Balance with Bank of Mexico	4.1	—3.8	0.3	—0.1	0.5	3.1	—2.0	—1.1	—0.9	0.5	4.5	6.3	—7.0	4.3
Miscellaneous sources[6]	9.5	0.8	—1.0	—3.8	0.3	—0.3	0.9	—3.4	0.4	2.3	2.5	13.7	40.9	62.8
Rediscounts[7]	9.0	—1.1	—2.9	—1.6	13.0	—0.2	—0.8	13.0	—3.5	8.7	52.6	—74.7	2.4	13.9
Total	53.1	—3.0	—2.9	—2.4	19.4	5.4	2.4	12.2	1.6	22.0	70.8	76.6	47.8	293.0
Losses		—2.8	—3.7	—	0.1	1.1	0.8	0.4	—3.2	—0.3	—3.7	—0.9	*	
NET TOTAL		—5.8	—6.6	—2.4	19.5	6.5	3.2	12.6	—1.6	21.7	67.1	75.7		

Source: *Veinticinco Años del Banco Nacional de Crédito Agrícola y Ganadero,* México, 1951.

*Not available.

NOTE: Items may not add up to totals because of rounding.

[1] Represents paid-in capital minus capital amortization for losses.

[2] In the years 1939 and 1943 capital was reduced by deducting accumulated losses. These deductions have not been taken into account in this table and the figures used represent capital paid-in for the year. There is no breakdown for 1943.

[3] In 1949 the Government redeemed the credit paper of the National Agricultural Credit Bank rediscounted with the Bank of Mexico. In return, the Government received shares from the Bank. The increase in capital in 1949 is entirely due to these transactions and the funds available to the Bank consequently increased only in-so-far as the paper redeemed was liquidated by the borrowers of the Bank. It is estimated that 25% of the amount was recovered in this manner during 1950.

[4] Mainly Bank of Mexico.

[5] Changes in balances during each year.

[6] In 1949-50, this item represents mainly balances of credits granted by contractors engaged in land clearing and drilling, and by dealers in agricultural machinery.

[7] Rediscounts were made exclusively with the Bank of Mexico up to 1949. After the Government assumed the indebtedness to the Bank of Mexico, all rediscount operations with that bank were discontinued. In 1949, however, the Nacional Financiera opened rediscounting facilities for the Agricultural Credit Bank up to a maximum of 80 million pesos.

TABLE 37

AGRICULTURE

National Ejidal Credit Bank
(Banco Nacional de Crédito Ejidal)
Financing[1]
(millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
I. *INCREASES IN CAPITAL*[2]	*20.1*	*21.0*	*15.8*	*20.3*	*11.9*	*11.7*	*19.6*	*17.7*	*8.1*	*—1.1*	*249.5*	*—11.3*
II. *TRUST ACCOUNTS* ("fideicomisos")[3]	—	—	—	—	—	—	—	—	*1.0*	*1.0*	*14.7*	*99.5*
5 million pesos	—	—	—	—	—	—	—	—	—	—	6.9	—
5 million pesos	—	—	—	—	—	—	—	—	—	—	—	5.1
15 million pesos	—	—	—	—	—	—	—	—	—	—	7.8	5.9
40 million pesos	—	—	—	—	—	—	—	—	—	—	—	16.9
30 million pesos	—	—	—	—	—	—	—	—	—	—	—	30.0
80 million pesos	—	—	—	—	—	—	—	—	—	—	—	30.6
20 million pesos	—	—	—	—	—	—	—	—	—	—	—	9.3
Other trust accounts	—	—	—	—	—	—	—	—	1.0	1.0	—	1.7
III. *INCREASE IN PRIVATE LOANS*[4]	—	—	—	—	—	—	—	*9.4*	*2.0*	*15.4*	*—1.0*	*20.2*
IV. *INCREASE IN BANKING LOANS*[5]	—	—	—	—	*43.6*	*38.9*	*—1.6*	*42.4*	*53.3*	*—12.7*	*—153.6*	—[8]
National Foreign Trade Bank[6]	—	—	—	—	43.6	38.0	—3.9	23.5	41.8	—37.0	—106.0	—
Bank of Mexico[7]	—	—	—	—	—	—	3.2	16.1	14.3	24.3	—58.0	—
Nacional Financiera	—	—	—	—	—	0.9	—0.9	2.7	—2.7	—	—	—
Banco del Ahorro Nacional	—	—	—	—	—	—	—	0.1	—0.1	—	—	—
Eximbank	—	—	—	—	—	—	—	—	—	—	10.4	—
TOTAL I to IV	*20.1*	*21.0*	*15.8*	*20.3*	*55.5*	*50.6*	*18.0*	*69.5*	*64.4*	*2.6*	*109.6*	*108.4*
+Subsidies[9]	5.2	5.3	5.3	5.0	5.2	—	13.6	11.8	10.7	9.1	20.0	20.0
—Gross losses	*—15.1*	*—14.6*	*—17.6*	*—9.4*	*—2.0*	*—1.0*	*—20.9*	*—16.4*	*—14.0*	*—12.0*	*—21.1*	*—20.1*
NET TOTAL	*10.2*	*11.7*	*3.5*	*15.9*	*58.7*	*49.6*	*10.7*	*64.9*	*61.1*	*—0.3*	*108.5*	*108.3*

Source: National Ejidal Credit Bank, annual reports and data supplied to the Combined Mexican Working Party.

[1] Changes in funds available to the Bank from different sources, including increases in capital, funds disbursed out of trust accounts which are generally used as revolving credit funds, and changes in private and bank loans utilized.

[2] Increases in capital were provided by the Federal Government. No explanation has been found for the decrease in capital in 1948. In the middle of 1949, the Federal Government redeemed the Ejidal Bank's paper (representing loans by the Bank to its borrowers) rediscounted with the National Foreign Trade Bank and the Bank of Mexico. The amount of the debt assumed by the Federal Government equaled 249.5 million pesos. In return, the Government received from the Bank shares with a nominal value of only 42.5 million pesos. The remaining 207 million pesos were used by the Bank to write off accumulated losses and to establish a special capital reserve. In this table the entire 249.5 million pesos are treated as an increase in capital. Since the Government returned to the Ejidal Bank its paper rediscounted with the National Foreign Trade Bank and the Bank of Mexico when it assumed the Ejidal Bank's liability, the Ejidal Bank stands to acquire additional resources as its borrowers liquidate their indebtedness to it. It is estimated that the Ejidal Bank will recover about 160 million pesos in this manner. The decrease in capital in 1950 refers to cancellation of Government obligations to the Bank.

[3] Under this heading are itemized the seven most important accounts established in the Bank.

[4] According to the Bank, these are short term credits which have been liquidated each year. The amounts shown here represent changes in credits utilized. Private credit is granted to the Bank by purchasers of cotton, sellers of agricultural machinery, etc.

[5] These are also short-term credits which have been liquidated each year, and the amounts shown represent changes in utilized credits.

[6] These figures are based on information received from the National Foreign Trade Bank. According to the Ejidal Bank the figures should be: 1943, nil; 1944, nil; 1945, 117.3 million pesos; 1946, 21.5 million; 1947, 47.2 million; 1948, 34.8 million; 1949, 108.2 million pesos.

[7] According to information supplied to the Combined Mexican Working Party by the Bank of Mexico, the rediscounts of the Ejidal Bank with the Bank of Mexico showed the following balances outstanding (in pesos) at the end of each year: 1941, 103,000; 1942, 200,000; 1943, 93,000; 1944, 2.6 million; 1945, 3.2 million; 1946, 14.9 million; 1947, 31.7 million; 1948, 51.6 million.

[8] After the Government assumed the Bank's debt to the National Foreign Trade Bank and the Bank of Mexico in 1949, all rediscount operations were discontinued.

[9] For 1939-1948, National Ejidal Credit Bank annual reports. The Government has regularly granted 20 million pesos a year to the Bank. A part of each annual grant has entered the Bank's accounts as an increase in capital and the remainder as a subsidy. However, the sum of the capital increase and the subsidy in any year has not been found to equal 20 million pesos. For the ten year period 1939-1948, capital increases and subsidies add up to 216.1 million instead of 200 million pesos. Beginning with 1949, the grants have been designated as payments to the Bank for services rendered to the Government. For the sake of comparison, the 20 million pesos annual payments in 1949 and 1950 have been treated as subsidies, and the annual losses are consequently shown as 21.1 and 20.05 million pesos instead of 1 and 0.05 million pesos which the Bank shows as losses.

TABLE 38

IRRIGATION[1]

Investment and financing, 1939-1951

(Millions of pesos)

	1939	1940[15]	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
I. *INVESTMENT*[2]	*38.1*	*36.3*	*56.7*	*63.0*	*83.0*	*117.1*	*139.6*	*189.0*	*228.3*	*249.3*	*260.7*	*371.9*	*502.1*
Large scale irrigation[3]	30.4	33.7	41.2	42.8	61.1	85.4	91.1	146.0	164.7	163.3	162.9	227.0	373.0
Small scale irrigation[3]	—		2.9	5.2	7.4	12.0	14.3	20.0	14.6	15.4	18.9	19.6	
Other costs connected with irrigation investments[4]	4.7		5.1	8.3	7.6	12.8	30.0	15.0	21.9	28.3	26.7	46.3	
Valle de Mexico project[5]	—		1.9	2.1	2.2	1.5	1.4	2.0	13.4	12.3	14.3	16.5	11.4
Papaloapan project[6]	—		—	—	—	—	—	1.5	7.3	16.0	21.1	37.5	83.2
Tepalcatepec project[6]	—		—	—	—	—	—	—	4.0	10.0	13.0	17.0	26.5
Maintenance and repairs[7]	3.0	2.6	5.6	4.6	4.7	5.4	2.8	4.5	2.4	4.0	3.8	8.0	8.0
II. *FINANCING*	*38.1*	*36.3*	*56.7*	*63.0*	*83.0*	*117.1*	*139.6*	*189.0*	*228.3*	*249.3*	*260.7*	*371.9*	*502.1*
Federal budget appropriations:													
Fiscal resources[8]	39.5	30.6	—	—	80.6	105.3	152.9	194.8	210.8	223.4	237.1	279.3	311.7
Sale of bonds[9]	—	—	50.0	67.1	—	—	—	—	—	—	—	—	—
Appropriations from State governments[10]	—	—	—	—	—	—	—	—	6.0	8.1	6.2	5.0	16.8
Private contributions[11]	—	—	—	—	—	—	—	—	—	—	21.3	47.7	182.8
Foreign loans:													
Bank of America[12]	—	—	—	—	—	—	—	—	—	—	0.1	12.0	7.3
Eximbank[13]	—	—	—	—	—	—	—	—	—	—	—	—	32.9
Difference between actual investments and ascertained financing[14]	—1.4	5.7	6.7	—4.1	2.4	11.8	—13.3	—5.8	11.5	17.8	—4.0	27.9	—49.4

Sources: Ministry of Agriculture and Development, Ministry of Hydraulic Resources and Ministry of Finance and Public Credit.

[1] Until 1946 irrigation development was undertaken by the National Irrigation Commission, Ministry of Agriculture and Development; from 1947, it was undertaken by the Ministry of Hydraulic Resources. Sanitation engineering carried out by the Ministry of Hydraulic Resources from 1947 has been excluded.

[2] For 1939 and 1940, data from E. Alanís Patiño, "Las tierras de riego," in Problemas Agrícolas e Industriales de México, Vol. II, No. 2, Mexico, 1950, p. 146. For 1941-1946: Ministry of Agriculture and Development, Report for 1945-46, Vol. II, pp. 586-588; for 1947-1951, data obtained directly from Ministry of Hydraulic Resources and from its Report for 1949-50, pp. 526-527. The figures for 1951 represent funds available for the various projects in that year.

[3] Cost of construction only.

[4] Administrative and general expenses, research expenses, real estate, etc.

[5] The Valle de Mexico project includes all water management of the area surrounding the Capital, and is an irrigation project only in part.

[6] The Papaloapan and Tepalcatepec projects are multi-purpose river development projects.

[7] For the years 1939-46, this item includes all costs of operation of the irrigation districts, including those operated by the National Irrigation Commission and the National Bank for Agricultural Credit (source: Ministry of Agriculture and Development, Report for 1945-46, Vol. II, p. 586, and Alanís Patiño, op. cit., p. 146). For the years 1947-50 it includes only that part of those costs which refers to maintenance and repairs (source: Ministry of Agriculture and Livestock, Report for 1949-50, p. 75; Alanís Patiño, op. cit., p. 146 and information supplied by the Ministry of Hydraulic Resources). The figures refer to calendar years except that for 1949, which is the average for the agricultural years 1948/49 and 1949/50.

[8] For 1939-1946: Departamento de Estudios Económicos, Dirección de Estudios Hacendarios, Ministry of Finance and Public Credit. As this source includes expenditures for construction only, administrative and general expenses have been added (cf. footnote 4). The costs of operation of the irrigation districts have also been added. These expenditures were partly financed out of the income of the districts, and partly out of Government subsidies. Since no information is available on the income of the districts, the total costs of operation have been considered as budget expenditures.

For 1947-1951, information supplied by the Ministry of Hydraulic Resources. From the figures given by the Ministry of Hydraulic Resources (214.0 million pesos for 1947; 235.1 for 1948, 245.8 for 1949 and 284.3 million pesos for 1950), the expenditures for sanitation engineering paid out of budget appropriations have been deducted and expenditures for repair and maintenance of the irrigation districts have been added, and considered as paid entirely out of fiscal resources.

[9] Source: Bank of Mexico. It has been assumed that no ordinary budget appropriations were utilized during 1941 and 1942 and that financing came from the proceeds of bonds issued in those years.

[10] For 1939-46: Jorge L. Tamayo, "Inversiones gubernamentales en regadío," Revista de Economía, January 1946, p. 40 and Seis Años de Actividad Nacional, p. 463. According to these sources, funds derived from the State governments for irrigation purposes must have been negligible during this period. For 1947-51, information supplied by the Ministry of Hydraulic Resources.

[11] For 1949-50, funds contributed by future users of the water in some irrigation districts, partly by placing their bonds with the banking system through the Bank of Mexico. For 1951, the figure represents an amount entitled "other financing" in the budget of the Ministry of Hydraulic Resources, less foreign loans. For the most part, this item probably represents estimated private capital contributions of a character similar to those in the years 1949 and 1950.

[12] Loan of $2.2 million for the President Alemán Dam, disbursed from 1949 to 1951.

[13] Loans of $19 million for the Falcón and Anzaldúas Dams and the Alto Yaqui Canal. It has been assumed that 20% of the Eximbank loans will be disbursed in 1951.

[14] For 1939-46, the difference between actual investments and ascertained financing in this period is probably due mostly to differences in timing between financing and investment. For the whole period, 1939-46, the discrepancy (2 million pesos) is almost eliminated. For 1947-50, the difference mainly represents other unexplained sources of financing, principally increases of short term debt to contractors.

[15] No details available.

TABLE 39

IRRIGATION

Area of irrigated land, 1928-1950; harvested area, 1945-1950 and capacity of irrigation dams, 1943-1949

	1928-1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
I. *AREA UNDER IRRIGATION* (thousands of hectares)[1]													
Annual data	—	*22.6*	*32.1*	*40.0*	*141.0*	*82.9*	*68.7*	*27.3*	*213.7*	*120.3*	*104.3*	*82.5*	*63.8*
New land	—	13.2	17.5	28.8	51.6	56.8	56.2	22.3	83.0	94.0	67.2	62.2	33.1
Improved land	—	9.4	14.6	11.2	89.4	26.1	12.5	5.0	130.7	26.3	37.1	20.3	30.6
Cumulative area	*216.5*	*239.1*	*271.2*	*311.2*	*452.2*	*535.1*	*603.8*	*631.1*	*816.1*	*936.4*	*1040.7*	*1123.2*	*1187.0*
New land	125.8	139.0	156.5	185.3	236.9	293.7	349.9	372.2	419.8	513.8	581.0	643.2	676.4
Improved land	90.7	100.1	114.7	125.9	215.3	241.4	253.9	258.9	396.3	422.6	459.7	480.0	510.6
II. *AREA OF IRRIGATION DISTRICTS* (thousands of hectares)[2]	*	*	*	*	*	*	*	*	*821.4*	*850.6*	*926.0*	*939.7*	*939.7*
Operated by Dirección General de Distritos de Riego or under its supervision									702.2	727.0	791.7	803.3	803.3
Operated by others									119.2	123.6	134.3	136.4	136.4
III. *HARVESTED AREA IN IRRIGATION DISTRICTS* (thousands of hectares)[3]	*	*	*	*	*	*	*	*640.7*	*643.2*	*625.1*	*720.1*	*757.6*	*848.4*
IV. *VALUE OF HARVESTS IN IRRIGATION DISTRICTS* (millions of pesos)[3]	*	*	*	*	*	*	*	*371.6*	*371.7*	*456.7*	*735.2*	*938.4*	*1028.9*

V. *CAPACITY AND STORAGE OF IRRIGATION DAMS*												
Capacity of irrigation dams (millions of cubic meters)[4]	*	*	*	*	*	*	*	15577	15577	16422	17647	*
Maximum volume of storage water (millions of cubic meters)[4]	*	*	*	*	*	*	*	7191	8629	8489	8594	*
Relation of storage to capacity (%)	—	—	—	—	—	—	—	46.4	53.6	51.9	48.7	—
Volume of water distributed in irrigation districts (millions of cubic meters)[5]	*	*	*	*	6509	5815	6809	5845	5457	7123	7633	7120

Sources: Ministry of Agriculture and Development and Ministry of Hydraulic Resources.

*Not available.

[1] For 1928-46, E. Alanís Patiño, "Las tierras de riego," in Problemas Agrícolas e Industriales de México, Vol. II, No. 2, 1950, p. 152. For 1947-49, Ministry of Hydraulic Resources, Report for 1949-50, p. 30. For 1950, information supplied by Ministry of Hydraulic Resources.

[2] Ministry of Agriculture and Livestock, Reports for 1947/48, 1948/49 and 1949/50 (see especially Report for 1948-49, p. 77). The breakdown for the years 1946-1948 is estimated on the assumption that the proportions are the same as in 1947/48 and 1949/50. Information given in the 1947-48 report does not conform entirely to data in the other two. Figures refer to end of agricultural year.

[3] For 1945, Seis Años de Actividad Nacional, p. 648. For 1946-50, Ministry of Agriculture and Livestock, Report for 1949/50, p. 76. The figures refer to agricultural cycles (1950 = 1949/50, etc.) Only harvested area and harvests in districts operated by or under the supervision of the National Commission for Irrigation (1945) and the Dirección General de Distritos de Riego (1946-50) have been taken into account. Discrepancies occur between the area of the districts and the harvested area since, on the one hand, not all cultivable land is cultivated, and, on the other, some areas are harvested more than once. Discrepancies between the figures of the Ministry of Hydraulic Resources and those of the Ministry of Agriculture and Livestock are attributable to conceptual differences and to the fact that not all the irrigation districts have been operated by or under the supervision of the Ministry of Agriculture. The Ministry of Hydraulic Resources' Report for 1949/50 contains figures on the value of agricultural production on irrigated land in 1946 and 1950, which are considerably higher than the data of the Ministry of Agriculture and Livestock shown here (700 million pesos in 1946 and 1,400 million in 1950). This is partly due to the fact that the data of the Ministry of Hydraulic Resources include all irrigated land. According to information received from the Ministry of Hydraulic Resources these figures, however, are not based on actual statistical materials, but merely represent rough estimates.

[4] Ministry of Agriculture and Livestock, Report for 1949/50, p. 73. The figures include all districts operated by or under the supervision of the Ministry of Agriculture and Livestock.

[5] For 1943-49, Alanís Patiño, op. cit., p. 141. For 1950, Ministry of Agriculture and Livestock, Report for 1949/50, p. 76. The period is the agricultural cycle. The data presumably include only districts operated by or under the supervision of the Ministry of Agriculture and Livestock. Some of the volume of water comes directly from rivers, without previous storage.

TABLE 40

AGRICULTURE

Harvested Area, 23 selected crops, 1925/29–1950
(thousands of hectares)[1]

	1925-1929 annual average	1930-1934 annual average	1935-1939 annual average	1939	1940-1944 annual average	1945-1949 annual average	1948	1949	1950[2]
TOTAL HARVESTED AREA	*6,478*	*6,355*	*6,369*	*6,971*	*7,391*	*7,958*	*8,249*	*8,601*	*9,762*
Food crops	*5,970*	*5,916*	*5,703*	*6,303*	*6,499*	*6,867*	*7,120*	*7,278*	*8,129*
Rice	47	34	39	45	63	77	82	108	111
Corn	4,447	4,633	4,466	4,940	5,006	5,276	5,438	5,537	6,295
Wheat	510	503	505	563	564	519	577	535	604
Beans	697	519	447	492	544	604	614	690	727
Chickpeas	119	93	84	89	115	140	144	134	120
Coffee	87	87	116	120	128	137	136	145	146
Cacao	8	5	6	7	10	20	27	27	27
Tomatoes	40	30	25	30	45	66	74	73	68
Potatoes	15	12	15	17	24	28	28	29	31
Forage crops									
Alfalfa	*47*	*40*	*38*	*42*	*44*	*50*	*53*	*53*	*54*
Fibers	*310*	*235*	*388*	*361*	*469*	*543*	*544*	*689*	*967*
Henequen	119	94	95	99	123	140	139	140	141
Cotton	191	141	293	262	346	403	405	549	826
Oilseeds	*49*	*56*	*90*	*100*	*183*	*233*	*254*	*273*	*319*
Sesame seed	24	33	58	61	106	131	139	147	168
Copra	11	12	13	14	12	16	19	21	21
Palm kernels	*	*	*	*	9	15	15	15	15
Peanuts	11	7	13	16	34	32	31	36	54
Flaxseed	3	4	6	9	22	39	50	54	61
Other industrial crops	*84*	*86*	*106*	*113*	*148*	*200*	*209*	*236*	*218*
Sugar cane	67	72	87	94	124	164	173	201	183
Tobacco	17	14	19	19	24	36	36	35	35
Fruits	*18*	*22*	*44*	*52*	*48*	*65*	*69*	*72*	*75*
Oranges	6	7	11	17	19	28	30	34	37
Lemons	1	2	3	5	6	9	10	10	11
Bananas	10	12	28	28	20	24	24	24	22
Pineapple	1	1	2	2	3	4	5	4	5

Source: Dirección de Economía Rural, Ministry of Agriculture and Livestock, except data on corn, beans and tomatoes, which for 1939-49, are estimated by the National Income Section, Department of Economic Studies, Bank of Mexico, and for 1925-39 and 1950 by the Combined Mexican Working Party. Area where corn and beans are grown together is included under corn only.

*Not available.

[2] Preliminary.

[1] One hectare = 2.471 acres.

TABLE 41

AGRICULTURE

Harvested Area, 23 selected crops, 1925/29–1950
(Percentages)

	1925-1929 annual average	1930-1934 annual average	1935-1939 annual average	1939	1940-1944 annual average	1945-1949 annual average	1948	1949	1950[1]
TOTAL HARVESTED AREA	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Food crops	*92.1*	*93.1*	*89.5*	*90.4*	*87.9*	*86.3*	*86.3*	*84.6*	*83.3*
Rice	0.7	0.5	0.6	0.6	0.9	1.0	1.0	1.3	1.1
Corn	68.6	72.9	70.1	70.9	67.7	66.3	65.9	64.4	64.5
Wheat	7.9	7.9	7.9	8.1	7.6	6.5	7.0	6.2	6.2
Beans	10.8	8.2	7.0	7.1	7.4	7.6	7.4	8.0	7.4
Chickpeas	1.8	1.5	1.3	1.3	1.6	1.7	1.7	1.6	1.2
Coffee	1.3	1.4	1.8	1.7	1.7	1.7	1.6	1.7	1.5
Cacao	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.3
Tomatoes	0.6	0.5	0.4	0.4	0.6	0.8	0.9	0.8	0.7
Potatoes	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3
Forage crops	*0.7*	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*
Alfalfa	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Fibers	*4.8*	*3.7*	*6.1*	*5.2*	*6.3*	*6.8*	*6.6*	*8.0*	*9.9*
Henequen	1.8	1.5	1.5	1.4	1.7	1.8	1.7	1.6	1.4
Cotton	2.9	2.2	4.6	3.8	4.7	5.1	4.9	6.4	8.5
Oilseeds	*0.8*	*0.9*	*1.4*	*1.4*	*2.5*	*2.9*	*3.1*	*3.2*	*3.3*
Sesame	0.4	0.5	0.9	0.9	1.4	1.6	1.7	1.7	1.7
Copra	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Palm kernels	*	*	*	*	0.1	0.2	0.2	0.2	0.2
Peanuts	0.2	0.1	0.2	0.2	0.5	0.4	0.4	0.4	0.6
Flaxseed	—	0.1	0.1	0.1	0.3	0.5	0.6	0.6	0.6
Other industrial crops	*1.3*	*1.4*	*1.7*	*1.6*	*2.0*	*2.5*	*2.5*	*2.7*	*2.2*
Sugar cane	1.0	1.1	1.4	1.3	1.7	2.1	2.1	2.3	1.9
Tobacco	0.3	0.2	0.3	0.3	0.3	0.5	0.4	0.4	0.4
Fruits	*0.3*	*0.3*	*0.7*	*0.7*	*0.7*	*0.8*	*0.8*	*0.8*	*0.8*
Oranges	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.4	0.4
Lemons	—	—	—	0.1	0.1	0.1	0.1	0.1	0.1
Bananas	0.2	0.2	0.4	0.4	0.3	0.3	0.3	0.3	0.2
Pineapple	—	—	—	—	—	0.1	0.1	—	0.1

Source: Table 40.

*Not available.

[1] Preliminary.

TABLE 42

AGRICULTURE

Harvested Area, 23 selected crops, 1925/29–1950
Indices, 1939 = 100

	1925-1929 annual average	1930-1934 annual average	1935-1939 annual average	1939	1940-1944 annual average	1945-1949 annual average	1948	1949	1950[1]
TOTAL HARVESTED AREA	*92.9*	*91.2*	*91.4*	*100.0*	*106.0*	*114.2*	*118.3*	*123.4*	*140.0*
Food crops	*94.7*	*93.9*	*90.5*	*100.0*	*103.1*	*108.9*	*113.0*	*115.5*	*129.0*
Rice	104.4	75.6	86.7	100.0	140.0	171.1	182.2	240.0	246.7
Corn	90.0	93.8	90.4	100.0	101.3	106.8	110.1	112.1	127.4
Wheat	90.6	89.3	89.7	100.0	100.2	92.2	102.5	95.0	107.3
Beans	141.7	105.5	90.9	100.0	110.6	122.8	124.8	140.2	147.8
Chickpeas	133.7	104.5	94.4	100.0	129.2	157.3	161.8	150.6	134.8
Coffee	72.5	72.5	96.7	100.0	106.7	114.2	113.3	120.8	121.7
Cacao	114.3	71.4	85.7	100.0	142.9	285.7	385.7	385.7	385.7
Tomatoes	133.3	100.0	83.3	100.0	150.0	220.0	246.7	243.3	226.7
Potatoes	88.2	70.6	88.2	100.0	141.2	164.7	164.7	170.6	182.4
Forage crops	*111.9*	*95.2*	*90.5*	*100.0*	*104.8*	*119.0*	*126.2*	*126.2*	*128.6*
Alfalfa	111.9	95.2	90.5	100.0	104.8	119.0	126.2	126.2	128.6
Fibers	*85.9*	*65.1*	*107.5*	*100.0*	*129.9*	*150.4*	*150.7*	*190.9*	*267.9*
Henequen	120.2	94.9	96.0	100.0	124.2	141.4	140.4	141.4	142.4
Cotton	72.9	53.8	111.8	100.0	132.1	153.8	154.6	209.5	315.3
Oilseeds	*49.0*	*56.0*	*90.0*	*100.0*	*183.0*	*233.0*	*254.0*	*273.0*	*319.0*
Sesame	39.3	54.1	95.1	100.0	173.8	214.8	227.9	241.0	275.4
Copra	78.6	85.7	92.9	100.0	85.7	114.3	135.7	150.0	150.0
Palm kernels (1941=100)	—	—	—	—	180.0	300.0	300.0	300.0	300.0
Peanuts	68.8	43.8	81.3	100.0	212.5	200.0	193.8	225.0	337.5
Flaxseed	33.3	44.4	66.6	100.0	244.4	433.3	555.6	600.0	677.8
Other industrial crops	*74.3*	*76.1*	*93.8*	*100.0*	*131.0*	*177.0*	*185.0*	*208.8*	*192.9*
Sugar cane	71.3	76.6	92.6	100.0	131.9	174.5	184.0	213.8	194.7
Tobacco	89.5	73.7	100.0	100.0	126.3	189.5	189.5	184.2	184.2
Fruits	*34.6*	*42.3*	*84.6*	*100.0*	*92.3*	*125.0*	*132.7*	*138.5*	*144.2*
Oranges	35.3	41.2	64.7	100.0	111.8	164.7	176.5	200.0	217.6
Lemons	20.0	40.0	60.0	100.0	120.0	180.0	200.0	200.0	220.0
Bananas	35.7	42.9	100.0	100.0	71.4	85.7	85.7	85.7	78.6
Pineapple	50.0	50.0	100.0	100.0	150.0	200.0	250.0	200.0	250.0

Source: Table 40.

[1] Preliminary.

TABLE 43

AGRICULTURE

Volume of Production, 24 selected crops, 1925/29–1950
(thousands of metric tons)

	1925-1929 annual average	1930-1934 annual average	1935-1939 annual average	1939	1940-1944 annual average	1945-1949 annual average	1948	1949	1950[1]
Food crops									
Rice (rough)	82.2	71.0	82.9	103.1	108.8	149.2	162.9	184.6	206.5
Corn	2,862.6	2,667.8	2,519.3	2,989.0	2,993.7	3,600.4	4,136.8	3,510.8	4,719.7
Wheat	292.8	328.8	340.6	428.8	425.2	417.9	477.2	503.2	587.3
Beans	377.5	293.8	260.4	329.8	347.3	402.9	466.6	437.5	494.1
Chickpeas	71.5	55.7	49.9	55.8	77.2	104.9	110.6	97.0	84.0
Coffee (in berry)	201.6	186.4	271.3	268.2	263.2	273.4	260.1	288.7	293.1
Cacao	1.4	0.8	1.3	1.8	1.7	5.1	6.5	6.7	6.7
Tomatoes	117.3	107.7	101.6	119.0	221.5	392.7	425.4	497.6	432.0
Potatoes	45.5	51.4	69.3	70.9	105.9	127.7	128.0	130.5	138.2
Forage crops									
Alfalfa	1,747.3	1,635.1	1,554.1	1,736.5	1,862.2	2,178.1	2,248.3	2,290.6	2,417.0
Fibers									
Henequen	132.4	108.0	92.5	85.7	114.5	111.6	122.9	104.1	121.6
Cotton	54.8	42.2	72.4	67.6	94.3	122.4	119.7	207.7	253.0
Oilseeds									
Cottonseed	106.8	80.9	131.9	119.4	156.9	202.1	199.1	345.5	400.0
Sesame seed	11.8	13.1	25.9	33.2	54.2	69.3	72.9	70.0	84.8
Copra	19.8	20.7	23.9	24.3	21.1	28.0	31.4	32.2	*
Palm kernels	*	*	*	*	5.5	10.1	10.2	10.2	10.7
Peanuts	6.5	5.3	11.1	15.0	34.0	33.9	35.0	38.2	64.1
Flaxseed	1.2	2.1	2.8	3.9	12.4	33.3	48.5	50.4	59.8
Other industrial crops									
Sugar cane	3,050.8	3,188.9	4,131.8	4,556.0	6,212.4	8,468.3	9,558.8	10,431.6	9,418.7
Tobacco	10.8	10.9	17.3	21.2	23.9	35.8	35.5	33.8	35.0
Fruits									
Oranges	100.7	110.7	151.2	183.3	245.1	358.7	400.2	411.2	464.2
Lemons	13.7	18.3	23.7	30.9	39.3	61.0	63.5	65.0	71.9
Bananas	186.8	231.8	474.3	506.7	277.2	301.5	300.0	308.4	256.9
Pineapple	18.0	20.2	37.3	32.7	53.3	104.3	124.2	102.7	130.0

Source: Dirección de Economía Rural, Ministry of Agriculture and Livestock, except data on corn, beans and tomatoes, which for 1939-49, are estimated by the National Income Section, Department of Economic Studies, Bank of Mexico, and for 1925-39 and 1950 by the Combined Mexican Working Party.

*Not available.

[1] Preliminary.

TABLE 44

AGRICULTURE

Volume of Production, 24 selected crops, 1925/29–1950
(Indices 1939 = 100)

	1925-1929 annual average	1930-1934 annual average	1935-1939 annual average	1939	1940-1944 annual average	1945-1949 annual average	1948	1949	1950[1]
GENERAL INDEX (24 crops)	*88.3*	*80.6*	*87.7*	*100.0*	*112.9*	*140.8*	*155.2*	*163.6*	*190.1*
Food crops	*93.5*	*85.8*	*83.6*	*100.0*	*105.5*	*128.4*	*145.2*	*135.8*	*162.3*
Rice (rough)	79.7	68.9	80.4	100.0	105.5	144.7	158.0	179.0	200.3
Corn	95.8	89.3	84.3	100.0	100.2	120.5	138.4	117.5	157.9
Wheat	68.3	76.7	79.4	100.0	99.2	97.5	111.3	117.4	137.0
Beans	114.5	89.1	79.0	100.0	105.3	122.2	141.5	132.7	149.8
Chickpeas	128.1	99.8	89.4	100.0	138.4	188.0	198.2	173.8	150.5
Coffee (in berry)	75.2	69.5	101.2	100.0	98.1	101.9	97.0	107.6	109.3
Cacao	77.8	44.4	72.2	100.0	94.4	283.3	361.1	372.2	372.2
Tomatoes	98.6	90.5	85.4	100.0	186.1	330.0	357.5	418.2	363.0
Potatoes	64.2	72.5	97.7	100.0	149.4	180.1	180.5	184.1	194.9
Forage crops	*100.6*	*94.2*	*89.5*	*100.0*	*107.2*	*125.4*	*129.5*	*131.9*	*139.2*
Alfalfa	100.6	94.2	89.5	100.0	107.2	125.4	129.5	131.9	139.2
Fibers	*100.0*	*78.8*	*107.3*	*100.0*	*137.9*	*167.8*	*168.3*	*259.0*	*314.0*
Henequen	154.5	126.0	107.9	100.0	133.6	130.2	143.4	121.5	141.9
Cotton	81.1	62.4	107.1	100.0	139.5	181.1	177.1	307.2	374.3
Oilseeds	*64.4*	*56.8*	*90.6*	*100.0*	*147.0*	*199.3*	*213.8*	*266.6*	*319.1*
Cottonseed	89.4	67.8	110.5	100.0	131.4	169.3	166.8	289.4	335.0
Sesame seed	35.5	39.5	78.0	100.0	163.3	208.7	219.6	210.8	255.4
Copra	81.5	85.2	98.4	100.0	86.8	115.2	129.2	132.5	(132.5)
Palm kernels (1941=100)	—	—	—	—	161.8	297.1	300.0	300.0	314.7
Peanuts	43.3	35.3	74.0	100.0	226.7	226.0	233.3	254.7	427.3
Flaxseed	30.8	53.8	71.8	100.0	317.9	853.8	1,243.6	1,292.3	1,533.3
Other industrial crops	*64.1*	*66.7*	*89.1*	*100.0*	*132.1*	*182.8*	*202.2*	*216.6*	*199.3*
Sugar cane	67.0	70.0	90.7	100.0	136.4	185.9	209.8	229.0	206.7
Tobacco	50.9	51.4	81.6	100.0	112.7	168.9	167.5	159.4	165.1
Fruits	*44.8*	*52.9*	*89.2*	*100.0*	*94.4*	*132.6*	*144.2*	*144.3*	*155.5*
Oranges	54.9	60.4	82.5	100.0	133.7	195.7	218.3	224.3	253.2
Lemons	44.3	59.2	76.7	100.0	127.2	197.4	205.5	210.4	232.7
Bananas	36.9	45.7	93.6	100.0	54.7	59.5	59.2	60.9	50.7
Pineapple	55.0	61.8	114.1	100.0	163.0	319.0	379.8	314.1	397.6

Source: Table 43.

[1] Preliminary.

TABLE 45

AGRICULTURE

Volume of Production, Exports, Imports and Apparent Domestic Consumption of 24 Agricultural Products. 1939, 1948, 1949 and 1950 and Annual Averages 1940-1944, 1945-1949
(thousands of metric tons)

	1939	1940-1944 annual average	1945-1949 annual average	1948	1949	1950
FOOD PRODUCTS						
Rice						
Production	70.1	74.0	101.4	110.8	125.5	140.4
+Imports	—	0.1	0.8	—	—	—
—Exports	2.2	6.8	16.0	28.6	41.2	27.5
Apparent domestic consumption	67.9	67.3	86.2	82.2	84.3	112.9
Corn						
Production	2,989.0	2,993.7	3,600.2	4,136.8	3,510.8	4,719.7
+Imports	53.9	40.7	11.9	0.3	0.3	0.3
—Exports	—	—	3.2	0.3	14.9	—
Apparent domestic consumption	3,042.9	3,034.4	3,608.9	4,136.8	3,496.2	4,720.0
Wheat						
Production	428.2	425.2	417.9	477.2	503.2	587.3
+Imports	51.1	191.4	240.5	267.2	261.4	425.4
—Exports	—	—	1.7	—	8.7	—
Apparent domestic consumption	479.3	616.6	656.7	744.4	755.9	1,012.7
Beans						
Production	329.8	347.3	402.9	466.6	437.5	494.1
+Imports	3.7	—	0.5	0.1	—	—
—Exports	—	6.2	1.5	0.1	—	0.8
Apparent domestic consumption	333.5	341.1	401.9	466.6	437.5	493.3
Chickpeas						
Production	55.8	77.2	104.9	110.6	97.0	84.0
+Imports	—	—	—	—	—	—
—Exports	31.4	40.8	22.0	27.4	11.7	11.5
Apparent domestic consumption[1]	24.4	36.4	82.9	83.2	85.3	72.5
Coffee						
Production	54.8	53.8	55.8	53.2	59.0	59.9
+Imports	—	0.2	0.2	0.2	—	—
—Exports	34.6	28.7	35.9	31.0	48.3	45.4
Apparent domestic consumption	20.2	25.3	20.1	22.4	10.7	14.5
Cacao						
Production	1.8	1.7	5.1	6.5	6.7	6.7
+Imports	0.9	2.7	1.3	0.1	—	—
—Exports	—	—	1.0	0.2	0.1	3.4
Apparent domestic consumption	2.7	4.4	5.4	6.4	6.6	3.3
Tomatoes						
Production	119.0	221.5	392.7	425.4	497.6	432.0
+Imports	0.4	0.5	1.5	2.4	3.3	3.4
—Exports	12.3	59.5	96.4	102.9	92.6	74.3
Apparent domestic consumption	107.1	162.5	297.8	324.9	408.3	361.1
Potatoes						
Production	70.9	105.9	127.7	128.0	130.5	138.2
+Imports	0.8	1.3	5.3	7.9	4.9	1.3
—Exports	—	—	—	—	—	—
Apparent domestic consumption	71.7	107.2	133.0	135.9	135.4	139.5
FORAGE PRODUCTS						
Alfalfa						
Production	1,736.5	1,862.2	2,178.1	2,248.3	2,290.6	2,417.0
+Imports	—	—	—	—	—	—
—Exports	—	3.0	2.0	—	—	—
Apparent domestic consumption	1,736.5	1,859.2	2,176.1	2,248.3	2,290.6	2,417.0
FIBERS						
Henequen						
Production	85.7	114.5	111.6	122.9	104.1	121.6
—Exports	76.4	77.0	54.0	59.2	43.9	72.9
Apparent domestic consumption	9.3	37.5	57.6	63.7	60.2	48.7
Exports of henequen manufactures	2.8	8.9	28.4	33.3	23.7	19.3
Cotton						
Production	67.6	94.3	122.4	119.7	207.7	253.0
+Imports	0.8	0.3	0.3	0.3	0.4	0.2
—Exports: raw cotton	7.4	10.6	66.6	48.4	121.5	161.2
cotton lint	2.8	7.0	11.2	9.3	17.2	23.8
Apparent domestic consumption	58.2	77.0	44.9	62.3	69.4	68.2

TABLE 45—(Continued)

AGRICULTURE

Volume of Production, Exports, Imports and Apparent Domestic Consumption of 24 Agricultural Products. 1939, 1948, 1949 and 1950 and Annual Averages 1940-1944, 1945-1949

(thousands of metric tons)

	1939	1940-1944 annual average	1945-1949 annual average	1948	1949	1950
OILSEEDS						
Cottonseed						
Production	119.4	156.9	202.1	199.1	345.5	400.0
+Imports	1.9	1.5	2.9	3.6	4.7	4.2
—Exports	—	—	0.6	2.4	0.7	1.6
Apparent domestic consumption	121.3	158.4	204.4	200.3	349.5	402.6
Sesame seed						
Production	33.2	54.2	69.3	72.9	70.0	84.8
+Imports	—	0.2	0.1	—	—	—
—Exports	—	0.2	—	0.2	—	—
Apparent domestic consumption	33.2	54.2	69.4	72.7	70.0	84.8
Copra						
Production	24.3	21.1	28.0	31.4	32.2	(32.2)
+Imports	58.3	34.1	2.8	0.4	2.5	—
—Exports	—	—	—	—	—	—
Apparent domestic consumption	82.6	55.2	30.8	31.8	34.7	(32.2)
Palm kernels						
Production	—	5.5	10.1	10.2	10.2	10.7
+Imports	—	—	—	—	—	—
—Exports	—	—	—	—	—	—
Apparent domestic consumption	—	5.5	10.1	10.2	10.2	10.7
Peanuts						
Production	15.0	34.0	33.9	35.0	38.2	64.1
+Imports	—	0.2	—	—	—	—
—Exports	—	1.1	2.1	0.3	4.6	10.4
Apparent domestic consumption	15.0	33.1	31.8	34.7	33.6	53.7
Flaxseed						
Production	3.9	12.4	33.3	48.5	50.4	59.8
+Imports	—	0.4	—	—	—	—
—Exports	—	4.8	17.7	30.7	37.2	22.2
Apparent domestic consumption	3.9	8.0	15.6	17.8	13.2	37.6
OTHER INDUSTRIAL PRODUCTS						
Sugar						
Production	331.0	369.6	499.8	611.0	645.0	590.0
+Imports	—	26.0	38.2	—	—	—
—Exports	6.0	—	61.2	171.0	135.0	21.0
Apparent domestic consumption	325.0	395.6	476.8	440.0	510.0	569.0
Real consumption[2]	*	401.8	475.6	506.0	563.0	556.0
Tobacco						
Production	21.2	23.9	35.8	35.5	33.8	35.0
+Imports	0.1	0.2	0.9	1.2	0.8	1.2
—Exports	0.1	—	0.2	0.2	0.1	0.3
Apparent domestic consumption	21.2	24.1	36.5	36.5	34.5	35.9
FRUITS						
Oranges						
Production	183.3	245.1	358.2	400.2	411.2	464.2
+Imports	—	—	—	0.1	—	—
—Exports	—	0.6	0.4	—	2.2	28.7
Apparent domestic consumption	183.3	244.5	357.8	400.3	409.0	435.5
Lemons						
Production	30.9	39.3	61.0	63.5	65.0	71.9
+Imports	—	—	—	—	—	—
—Exports	3.1	2.2	2.3	7.0	0.2	3.4
Apparent domestic consumption	27.8	37.1	58.7	56.5	64.8	68.5
Bananas						
Production	506.7	277.2	301.5	300.0	308.4	256.9
+Imports	—	—	—	—	—	—
—Exports[3]	292.9	100.0	107.0	102.7	97.6	79.1
Apparent domestic consumption	213.8	177.2	194.5	197.3	210.8	177.8
Pineapple						
Production	32.7	53.3	104.3	124.2	102.7	130.0
+Imports	—	—	—	—	—	—
—Exports: fresh pineapple	8.3	10.9	25.8	38.5	28.0	31.3
prepared pineapple	—	0.8	5.4	6.1	8.6	13.8
Apparent domestic consumption	24.4	41.6	73.1	79.6	66.1	84.9

Source: Production: Table 43 except for coffee and sugar, where the volume in the table referred to for coffee in berry and sugar cane has been replaced by data comparable with import and export figures presented in this table. The sources used for the production of these two items are: for coffee, Dirección de Economía Rural, Ministry of Agriculture and Livestock, and for sugar, Economic Commission for Latin America, document E/CN.12/164, p. 149 (figures for 1939-49) and Nacional Financiera, Annual Report for 1951 (figures for 1950). Exports: For bananas, coffee, tomatoes, flaxseed, rice, chickpeas, cotton and henequen, Bank of Mexico data corrected for weight of packing. For other crops, Anuario Estadístico de Comercio Exterior. Imports: Anuario Estadístico de Comercio Exterior.

[1] Because of the great increase in stocks of chickpeas grown for export in recent years the consumption figures for 1948-50 give exaggerated estimates of domestic consumption.

[2] Production and imports-exports-net increase in inventories. Data from Nacional Financiera, Annual Report for 1951, p. 142.

[3] The conversion factor of stems into metric tons is from the publication of the Banco Nacional de Comercio Exterior, Comercio Exterior de México, 1949 and 1950.

TABLE 47

AGRICULTURE

General Indices for Volume of Production, Exports, Imports and Domestic Consumption of Agricultural Products, 24 Selected Crops, 1939-1950

Indices, 1939 = 100

	1939	1940-1944 annual average	1944	1945-1949 annual average	1948	1949	1950[4]
PRODUCTION							
Index I[1]	100.0	112.0	123.8	138.0	151.5	158.3	183.8
Index II[2]	100.0	112.9	126.4	140.8	155.2	163.6	190.1
Index III[3]	100.0	111.4	124.4	138.9	154.2	162.1	188.2
PRODUCTION FOR DOMESTIC CONSUMPTION[5]	100.0	111.2	121.4	129.8	145.7	142.9	167.1
EXPORTS	100.0	112.1	151.8	223.3	230.0	343.4	384.9
IMPORTS	100.0	175.9	331.5	172.6	154.0	150.9	236.0
CONSUMPTION							
Apparent domestic consumption	100.0	114.0	130.6	131.7	146.1	143.3	170.2
Apparent domestic per capita consumption	100.0	107.1	117.0	108.9	117.5	112.1	128.7
Apparent domestic consumption of food crops[6]	100.0	109.5	130.9	132.5	146.5	139.4	172.2
Apparent domestic per capita consumption of food crops[6]	100.0	102.8	117.2	109.5	117.9	109.0	130.2

Source: Bank of Mexico and Table 45.

[1] Index prepared by the National Income Section, Departamento de Estadios Económicos, Bank of Mexico. Includes over 40 crops.

[2] Index prepared by the Combined Mexican Working Party. Includes 24 crops.

[3] Index prepared by the Combined Mexican Working Party, and differing from Index II insofar as it includes coffee and sugar as processed articles, with corresponding weights, and not as coffee in berry and sugarcane. It is this index that is comparable with the indices on production for domestic consumption, on exports and imports.

[4] Figures for 1950 are preliminary and consumption figures for that year have little relevance as such because of probable changes in stocks.

[5] Obtained as the difference between production and exports.

[6] Includes rice, corn, wheat, beans, chickpeas, tomatoes, potatoes and sugar.

TABLE 46

AGRICULTURE

Volume of Production, Exports, Imports and Apparent Domestic Consumption of 24 Agricultural Products
1939, 1948, 1949 and 1950 and Annual Averages 1940-1944, 1945-1949
(Indices, 1939 = 100)

	1939	1940-1944 annual average	1945-1949 annual average	1948	1949	1950
FOOD PRODUCTS						
Rice						
Production	100.0	105.6	144.7	158.1	179.0	200.3
Exports	100.0	309.1	727.3	1,300.0	1,872.7	1,250.0
Apparent domestic consumption	100.0	99.1	127.0	121.1	124.2	166.3
Corn						
Production	100.0	100.2	120.5	138.4	117.5	157.9
Imports	100.0	75.5	22.1	0.6	0.6	0.6
Apparent domestic consumption	100.0	99.7	118.6	136.0	114.9	155.1
Wheat						
Production	100.0	99.3	97.6	111.4	117.5	137.2
Imports	100.0	374.6	470.7	522.9	511.6	832.5
Apparent domestic consumption	100.0	128.7	137.0	155.3	157.7	211.3
Beans						
Production	100.0	105.3	122.2	141.5	132.7	149.8
Apparent domestic consumption	100.0	102.3	120.5	139.9	131.2	147.9
Chickpeas						
Production	100.0	138.4	188.0	198.2	173.8	150.5
Exports	100.0	129.9	70.1	87.3	37.3	36.6
Apparent domestic consumption[1]	100.0	149.2	339.8	341.0	349.6	297.1
Coffee						
Production	100.0	98.2	101.8	97.1	107.7	109.3
Exports	100.0	83.0	103.8	89.6	139.6	131.2
Apparent domestic consumption	100.0	125.3	99.5	110.9	53.0	71.8
Cacao						
Production	100.0	94.4	283.3	361.1	372.2	372.2
Imports	100.0	300.0	144.4	11.1	—	—
Apparent domestic consumption	100.0	163.0	200.0	237.0	244.4	122.2
Tomatoes						
Production	100.0	186.1	330.0	357.5	418.2	363.0
Imports	100.0	125.0	375.0	600.0	825.0	850.0
Exports	100.0	483.7	783.7	836.6	752.9	604.1
Apparent domestic consumption	100.0	151.7	278.1	303.4	381.2	337.2
Potatoes						
Production	100.0	149.4	180.1	180.5	184.1	194.9
Imports	100.0	162.5	662.5	987.5	612.5	162.5
Apparent domestic consumption	100.0	149.5	185.5	189.5	188.8	194.6
FORAGE PRODUCTS						
Alfalfa						
Production	100.0	107.2	125.4	129.5	131.9	139.2
Apparent domestic consumption	100.0	107.1	125.3	129.5	131.9	139.2
FIBERS						
Henequen						
Production	100.0	133.6	130.2	143.4	121.5	141.9
Exports	100.0	100.8	70.7	77.5	57.5	95.4
Apparent domestic consumption	100.0	403.2	619.4	684.9	647.3	523.7
Cotton						
Production	100.0	139.5	181.1	177.1	307.2	374.3
Exports	100.0	172.6	762.8	565.7	1,359.8	1,813.7
Apparent domestic consumption	100.0	132.3	77.2	107.0	119.2	117.2
OILSEEDS						
Cottonseed						
Production	100.0	131.4	169.3	166.8	289.4	335.0
Imports	100.0	78.9	152.6	189.5	247.4	221.1
Apparent domestic consumption	100.0	130.6	168.5	165.1	288.1	331.9
Sesame seed						
Production	100.0	163.3	208.7	219.6	210.8	255.4
Apparent domestic consumption	100.0	163.3	209.0	219.0	210.8	255.4
Copra						
Production	100.0	86.8	115.2	129.2	132.5	(132.5)
Imports	100.0	58.5	4.8	0.7	4.3	—
Apparent domestic consumption	100.0	66.8	37.3	38.5	42.0	(39.0)
Palm kernels (1941=100)						
Production		161.8	297.1	300.0	300.0	314.7
Apparent domestic consumption		161.8	297.1	300.0	300.0	314.7
Peanuts						
Production	100.0	226.7	226.0	233.3	254.7	427.3
Apparent domestic consumption	100.0	220.7	212.0	231.3	224.0	358.0
Flaxseed						
Production	100.0	317.9	853.8	1,243.6	1,292.3	1,533.3
Apparent domestic consumption	100.0	205.1	400.0	456.4	338.5	964.1
OTHER INDUSTRIAL PRODUCTS						
Sugar						
Production	100.0	111.7	151.0	184.6	194.9	178.3
Apparent domestic consumption	100.0	121.7	146.7	135.4	156.9	175.1
Tobacco						
Production	100.0	112.7	168.9	167.5	159.4	165.1
Imports	100.0	200.0	900.0	1,200.0	800.0	1,200.0
Apparent domestic consumption	100.0	113.7	172.2	172.2	162.7	169.3
FRUITS						
Oranges						
Production	100.0	133.7	195.4	218.3	224.3	253.2
Apparent domestic consumption	100.0	133.4	195.2	218.4	223.1	237.6
Lemons						
Production	100.0	127.2	197.4	205.5	210.4	232.7
Exports	100.0	71.0	74.2	225.8	6.5	109.7
Apparent domestic consumption	100.0	133.5	211.2	203.2	233.1	246.4
Bananas						
Production	100.0	54.7	59.5	59.2	60.9	50.7
Exports	100.0	34.1	36.5	35.1	33.3	27.0
Apparent domestic consumption	100.0	82.9	91.0	92.3	98.6	83.2
Pineapple						
Production	100.0	163.0	319.0	379.8	314.1	397.6
Exports	100.0	141.0	375.9	537.3	441.0	543.4
Apparent domestic consumption	100.0	170.5	299.6	326.2	270.9	348.0

Source: Table 45.

[1] Because of the great increase in stocks of chickpeas grown for export in recent years the consumption figures for 1948-1950 give exaggerated estimates of domestic consumption.

TABLE 48

AGRICULTURE

Average Annual Rates of Increase in Volume of Production, Exports, Imports, and Domestic Consumption of Agricultural Products, 24 Selected Crops, 1939-1950

(Percentages)

	1940-1944 annual average	1945-1949 annual average	1940-1949 annual average	1950	1940-1950 annual average
PRODUCTION					
Index I	4.4	5.0	4.7	16.1	5.7
Index II	4.8	5.3	5.0	16.2	6.0
Index III	4.5	5.4	4.9	16.1	5.9
PRODUCTION FOR DOMESTIC CONSUMPTION	4.0	3.3	3.6	16.9	4.8
EXPORTS	8.7	17.7	13.1	12.1	13.0
IMPORTS	27.1	—14.6	4.2	56.4	8.1
CONSUMPTION					
Apparent domestic consumption	5.5	1.9	3.7	18.8	5.0
Apparent domestic per capita consumption	3.2	—0.9	1.1	14.8	2.3
Apparent domestic consumption of food crops	5.5	1.3	3.4	23.5	5.1
Apparent per capita consumption of food crops	3.2	—1.4	0.9	19.5	2.4

Source: Table 47.

TABLE 49

AGRICULTURE

Yields per Hectare, 24 Selected Crops, 1925/29–1950

(metric tons)

	1925-1929 annual average	1930-1934 annual average	1935-1939 annual average	1939	1940-1944 annual average	1945-1949 annual average	1948	1949	1950[2]
Food crops									
Rice (rough)	1.75	2.09	2.13	2.29	1.73	1.94	1.99	1.71	1.86
Corn	0.64	0.58	0.56	0.61	0.60	0.68	0.76	0.63	0.75
Wheat	0.57	0.65	0.67	0.76	0.75	0.81	0.83	0.94	0.97
Beans[1]	0.54	0.57	0.58	0.67	0.64	0.67	0.76	0.63	0.68
Chickpeas	0.60	0.60	0.59	0.63	0.67	0.75	0.77	0.72	0.70
Coffee (in berry)	2.32	2.14	2.34	2.24	2.06	2.00	1.91	1.99	2.01
Cacao	0.18	0.16	0.22	0.26	0.17	0.26	0.24	0.25	0.25
Tomatoes	2.93	3.59	4.06	3.97	4.92	5.95	5.75	6.82	6.35
Potatoes	3.03	4.28	4.62	4.17	4.41	4.56	4.57	4.50	4.46
Forage crops									
Alfalfa	37.18	40.88	40.90	41.35	42.32	43.56	42.42	43.22	44.76
Fibers									
Henequen	1.11	1.15	0.97	0.87	0.93	0.80	0.88	0.74	0.86
Cotton	0.29	0.30	0.25	0.26	0.27	0.30	0.30	0.38	0.31
Oilseeds									
Cottonseed	0.56	0.57	0.45	0.46	0.45	0.50	0.49	0.63	0.48
Sesame seed	0.49	0.40	0.45	0.54	0.51	0.53	0.52	0.48	0.50
Copra	1.80	1.73	1.84	1.74	1.76	1.75	1.65	1.53	*
Palm kernels	*	*	*	*	0.61	0.67	0.68	0.68	0.71
Peanuts	0.59	0.76	0.85	0.94	1.00	1.06	1.13	1.06	1.19
Flaxseed	0.40	0.53	0.47	0.43	0.56	0.85	0.97	0.93	0.98
Other industrial crops									
Sugar cane	45.53	44.29	47.49	48.47	50.10	51.64	55.25	51.90	51.47
Tobacco	0.64	0.78	0.91	1.12	1.00	0.99	0.99	0.97	1.00
Fruits									
Oranges	16.78	15.81	13.75	10.78	12.90	12.81	13.34	12.09	12.55
Lemons	13.70	9.15	7.90	6.18	6.55	6.78	6.35	6.50	6.54
Bananas	18.68	19.32	16.94	18.10	13.86	12.56	12.50	12.85	11.68
Pineapple	18.00	20.20	18.65	16.35	17.77	26.08	24.84	25.68	26.00

Source: Based on tables 40 and 43.

*Not available.

[1] The yields per hectare for beans shown in this table were obtained as the relation between total production of beans and the harvested area where beans are grown as a single crop.

[2] Preliminary.

TABLE 50

AGRICULTURE

Yields per Hectare, 24 selected crops, 1925/29–1950
Indices, 1939 = 100

	1925-1929 annual average	1930-1934 annual average	1935-1939 annual average	1939	1940-1944 annual average	1945-1949 annual average	1948	1949	1950[1]
Food crops				*100.0*	*98.0*	*108.8*			*118.6*
Rice (rough)	76.4	91.3	93.0	100.0	75.5	84.7	86.9	74.7	81.2
Corn	104.9	95.1	91.8	100.0	98.4	111.5	124.6	103.3	123.0
Wheat	75.0	85.5	88.2	100.0	98.7	106.6	109.2	123.7	127.6
Beans	80.6	85.1	86.6	100.0	95.5	100.0	113.4	94.0	101.5
Chickpeas	95.2	95.2	93.7	100.0	106.3	119.0	122.2	114.3	111.1
Coffee (in berry)	103.6	95.5	104.5	100.0	92.0	89.3	85.3	88.8	89.7
Cacao	69.2	61.5	84.6	100.0	65.4	100.0	92.3	96.2	96.2
Tomatoes	73.8	90.4	102.3	100.0	123.9	149.9	144.8	171.8	159.9
Potatoes	72.7	102.6	110.8	100.0	105.8	109.4	109.6	107.9	107.0
Forage crops				*100.0*	*102.3*	*105.3*			*108.2*
Alfalfa	89.9	98.9	98.9	100.0	102.3	105.3	102.6	104.5	108.2
Fibers				*100.0*	*105.4*	*109.9*			*114.8*
Henequen	127.6	132.2	111.5	100.0	106.9	92.0	101.1	85.1	98.9
Cotton	111.5	115.4	96.2	100.0	103.8	115.4	115.4	146.2	119.2
Oilseeds				*100.0*	*96.0*	*104.2*			*100.2*
Cottonseed	121.7	123.9	97.8	100.0	97.8	108.7	106.5	137.0	104.3
Sesame seed	90.7	74.1	83.3	100.0	94.4	98.1	96.3	88.9	92.6
Copra	103.4	99.4	105.7	100.0	101.1	100.6	94.8	87.9	87.9
Palm kernels (1941=100)	—	—	—	—	89.7	98.5	100.0	100.0	104.4
Peanuts	62.8	80.9	90.4	100.0	106.4	112.8	120.2	112.8	126.6
Flaxseed	93.0	123.3	109.3	100.0	130.2	197.7	225.6	216.3	227.9
Other industrial crops				*100.0*	*100.8*	*103.1*			*103.0*
Sugar cane	93.9	91.4	98.0	100.0	103.4	106.5	114.0	107.1	106.2
Tobacco	57.1	69.6	81.2	100.0	89.3	88.4	88.4	86.6	89.3
Fruits				*100.0*	*96.5*	*93.4*			*89.6*
Oranges	155.7	146.6	127.6	100.0	119.7	118.8	123.7	112.2	116.4
Lemons	221.7	148.1	127.8	100.0	106.0	109.7	102.8	105.2	105.8
Bananas	103.2	106.7	93.6	100.0	76.6	69.4	69.1	71.0	64.5
Pineapple	110.1	123.5	114.1	100.0	108.7	159.5	151.9	157.1	159.0

Source: Table 49.

[1] Preliminary.

TABLE 51

AGRICULTURE

Importance of Various Factors in the Increase in Agricultural Production, 1939-1950

(Percentages)

	Increase over 1939			Increase over previous year or period		
	1940-1944	1945-1949	1950	1940-1944	1945-1949	1950
FACTORS RESPONSIBLE FOR INCREASE IN AGRICULTURAL PRODUCTION						
Increase in harvested area	6.0	14.2	40.0	6.0	7.7	22.7
Increase in yields per hectare	—0.8	7.5	14.5	—0.8	8.4	6.4
Increase in production, due to increases in harvested area and in yields per hectare, assuming the same distribution of harvested area between crops as in 1939	5.2	22.8	60.3	5.2	16.7	30.6
Increase in production due to changes in the distribution of harvested area between crops	7.3	14.7	18.6	7.3	6.9	3.4
Total increase in production	12.9	40.8	90.1	12.9	24.7	35.0
RELATIVE IMPORTANCE OF FACTORS RESPONSIBLE FOR INCREASE IN AGRICULTURAL PRODUCTION	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Increase in harvested area	46.5	34.8	44.4	46.5	31.2	64.8
Increase in yields per hectare	—6.2	21.1	22.5	—6.2	36.4	22.6
Changes in the distribution of harvested area between crops	59.7	44.1	33.1	59.7	32.4	12.6

Source: Tables 40, 43 and 49.

TABLE 52

AGRICULTURE

Production and Imports of Fertilizer, 1939-1950/51

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
Volume of production and imports of fertilizer (thousands of metric tons)	*	*	*	*	*	*	*34.3*	*29.5*	*47.0*	*38.4*	*42.8*	*62.7*	*
Production	*	*	*	*	*	*	13.0	14.1	22.5	23.8	25.8	42.6	
Imports	15.6	12.1	19.3	8.4	20.7	14.9	21.3	15.4	24.5	14.6	17.0	20.1	
Value of imports of fertilizer (millions of pesos)	2.7	2.6	3.9	2.6	5.4	4.0	5.6	4.3	8.0	6.0	10.4	11.6	*
Maximum production capacity of fertilizer plants (Thousands of metric tons)[1]													*198.7*
Guano													15.0
Superphosphate[2]													42.5
Ammonium-sulphate[3]													69.2
Mixed fertilizer													68.0
Other													4.0

Sources: Production: For 1945 to 1947, Economic Commission for Latin America, Document E/CN. 12/164, "El Desarrollo Industrial de México." For 1948 to 1950 production of Guanos y Fertilizantes, S.A. according to information supplied by that Company; production of other companies estimated at 8,000 metric tons annually, according to El Mercado de Valores, May 21, 1951, p. 6. Imports: Information supplied by the Bank of Mexico. Production capacity: for Guanos y Fertilizantes, S.A. information supplied by that Company; for other companies, El Mercado de Valores, May 21, 1951, p. 6.

[1] The ammonium-sulphate plant in Cuautitlán commenced operations in May 1951. Its annual capacity is 66,200 metric tons. The maximum capacity in 1950 accordingly was approximately 130,000 metric tons, as compared with an actual production of 43,000 metric tons. Guanos y Fertilizantes, S.A. has been working far below its maximum capacity. According to information supplied by the Company, this has been due principally to lack of storage facilities.

[2] Of which, Guanos y Fertilizantes, S.A. 37,500 metric tons, other companies 5,000.

[3] Of which, Guanos y Fertilizantes, S.A. 66,200 metric tons (Cuautitlán plant), other companies 3,000 (Nueva Rosita).

TABLE 53

AGRICULTURE

Imports of Insecticides, 1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
VOLUME (thousands of metric tons)	0.5	0.7	1.0	1.9	1.7	1.1	1.6	1.1	1.8	2.4	3.2	11.9
VALUE (millions of pesos)	0.6	1.0	1.5	2.0	1.9	2.0	3.4	3.3	4.0	5.5	9.2	35.1

Source: National Foreign Trade Bank, Comercio Exterior de México, 1938-1939, 1940-1948 and 1950.

TABLE 54

AGRICULTURE

Destination of Production and Origin of Domestic Consumption of Agricultural Products, 24 Selected Crops, 1939-1950

(Percentages)

	1939	1940-1944 annual average	1944	1945-1949 annual average	1948	1949	1950
PRODUCTION	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
For domestic consumption	90.8	90.8	88.8	85.2	86.2	80.5	81.1
For exports	9.2	9.2	11.2	14.8	13.8	19.5	18.9
Increases in production over 1939[1]	—	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
For domestic consumption	—	90.2	80.4	70.5	77.7	63.6	70.0
For exports	—	9.8	19.6	29.5	22.3	36.4	30.0
Increases in production over previous year or period[2]	—	*100.0*	—	*100.0*	—	*100.0*	*100.0*
For domestic consumption	—	90.2	—	62.4	—	—31.4	85.2
For exports	—	9.8	—	37.6	—	131.4	14.8
DOMESTIC CONSUMPTION	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
From domestic sources	95.7	93.3	89.0	94.3	95.4	95.4	94.0
Imports	4.3	6.7	11.0	5.7	4.6	4.6	6.0
Increases in domestic consumption over 1939[1]	—	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
From domestic sources	—	76.4	67.1	90.1	94.9	94.9	91.6
Imports	—	23.6	32.9	9.9	5.1	5.1	8.4
Increases in domestic consumption over previous year or period[2]	—	*100.0*	—	*100.0*	—	*100.0*[3]	*100.0*
From domestic sources	—	76.4	—	100.8	—	95.2	86.2
Imports	—	23.6	—	—0.8	—	4.8	13.8

Source: The data in this table are computed on the basis of the material used for the calculation of the indices on production (Index III), production for domestic consumption, production for exports, imports and apparent domestic consumption, shown in table 47. The table consequently shows the destination and the origin of the volume (and not of the value) of production and domestic consumption in each year or period.

[1] Shows the destination and the origin of the increase over 1939 in production and domestic consumption.

[2] Shows the destination and the origin of the increase in production and domestic consumption in each year or period, when compared with the previous year or period (1945-1949 as compared with 1940-1944, 1949 as compared with 1948, etc.).

[3] In 1949 there was a decline in consumption. The figures show the composition of the decline.

TABLE 55

LIVESTOCK

Number of livestock, 1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
Number of heads (thousands)												
Cattle	13,518	13,669	13,880	13,962	14,087	14,217	14,292	14,497	14,208	14,404	14,608	14,797
Horses	2,513	2,575	2,643	2,673	2,686	2,720	2,750	2,714	2,777	2,863	2,921	2,968
Mules	*	926	935	945	967	984	987	1,001	1,025	1,053	1,072	1,085
Donkeys	*	2,331	2,313	2,351	2,374	2,433	2,460	2,471	2,627	2,826	2,933	3,002
Sheep	*	4,464	4,539	4,611	4,673	4,704	4,754	4,742	4,756	4,772	4,772	4,838
Goats	6,946	6,916	6,891	6,928	6,945	6,974	6,982	6,947	7,010	7,101	7,156	7,201
Pigs	*	5,030	5,097	5,168	5,255	5,329	5,309	5,314	5,356	5,422	5,474	5,523
Birds	*	36,382	36,635	36,838	36,754	37,075	37,346	37,393	37,739	38,195	38,434	38,555
Indices (1940=100)												
Cattle	—	100.0	101.5	102.1	103.1	104.0	104.6	106.1	103.9	105.4	106.9	108.3
Horses	—	100.0	102.6	103.8	104.3	105.6	106.8	105.4	107.8	111.2	113.4	115.3
Mules	—	100.0	101.0	102.1	104.4	106.3	106.6	108.1	110.7	113.7	115.8	117.2
Donkeys	—	100.0	99.2	100.9	101.8	104.4	105.5	106.0	112.7	121.2	125.8	128.8
Sheep	—	100.0	101.7	103.3	104.7	105.4	106.5	106.2	106.5	106.9	106.9	108.4
Goats	—	100.0	99.6	100.2	100.4	100.8	101.0	100.4	101.4	102.7	103.5	104.1
Pigs	—	100.0	101.3	102.7	104.5	105.9	105.5	105.6	106.5	107.8	108.8	109.8
Birds	—	100.0	100.7	101.3	101.0	101.9	102.6	102.8	103.7	105.0	105.6	106.0
General Index[1]	—	100.0	101.2	102.0	103.0	104.1	104.6	105.3	104.9	106.7	108.2	109.5

Source: Dirección General de Ganadería, Ministry of Agriculture and Livestock. Figures for cattle, horses and goats adjusted by Nacional Financiera.

[1] Index computed by Combined Mexican Working Party. Weights based on average prices for each species in 1950 as estimated by Nacional Financiera.

TABLE 56

FORESTRY

Volume of Forestry Production, 1941-1949.

(Indices 1941 = 100)

	1941	1942	1943	1944	1945	1946	1947	1948	1949
All products[1]	*100.0*	*105.5*	*132.9*	*179.3*	*160.1*	*281.2*	*209.6*	*213.3*	*208.6*
Lumber	100.0	104.0	151.4	291.4	261.7	500.1	369.0	402.3	385.8
Other products[2]	100.0	106.6	120.2	102.1	90.2	130.5	99.9	83.2	86.7

Source: Bank of Mexico and Combined Mexican Working Party.

[1] Indices computed by Combined Mexican Working Party on the basis of data supplied by the Bank of Mexico on forestry products brought into consumption centers or exported. According to the Bank of Mexico, these data underestimate the volume of forestry products by at least 33% as a consequence of smuggling. Assuming a constant relation between registered production and smuggling the indices would, however, give the approximate picture of changes in production. Weights based on average unit prices in 1949. These indices do not conform with the index of real product in forestry in table on "Indices of Real Net Product and its Components," as some forestry products are in the national income calculations of the Bank of Mexico included with manufacturing.

[2] Includes charcoal, *candelilla* wax, *ixtle de lechuguilla, ixtle de palma,* resin, tar, chicle, walnut and other products.

TABLE 57

FISHERIES

Volume and value of fish catch, 1940-1949

	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
I. *VOLUME* (Metric tons)	*23,623*	*26,037*	*27,974*	*32,990*	*39,901*	*52,219*	*54,772*	*54,250*	*67,384*	*71,866*
Shrimp	5,102	3,209	4,612	4,666	*	7,401	10,462	11,894	18,844	18,499
Sardine	2,660	2,877	1,937	2,892	*	8,180	12,555	11,495	17,372	18,696
Other species	15,861	19,951	21,425	25,432	*	36,638	31,755	30,861	31,168	34,671
Indices (1940=100)[1]	*100*	*108*	*118*	*138*	*166*	*218*	*229*	*228*	*286*	*304*
Shrimp	100	63	90	92	*	145	205	233	369	362
Sardine	100	108	73	109	*	308	472	432	652	703
Other species	100	126	135	160	*	231	201	195	197	219
II. *VALUE* (millions of pesos)[2]	*13.7*	*14.6*	*21.9*	*21.4*	*	*43.8*	*60.5*	*89.6*	*108.0*	*103.8*
Shrimp	3.4	2.0	3.8	4.2	*	7.5	14.4	23.5	44.9	42.3
Sardine	1.4	3.4	1.4	2.1	*	7.5	12.2	14.9	23.5	26.4
Other species	8.9	9.2	16.7	15.1	*	28.8	33.9	51.2	39.6	35.1

Source: Nacional Financiera, study on Mexican fisheries, which includes adjusted data of the Ministry of Marine (Navy) to take account of underestimations of the value of the catch, especially in the case of sardines. Data for 1939 are not included in the study, and available figures of the Ministry of Marine for that year are not comparable with the figures shown here.

*Not available.

[1] Weighted volume index computed by the Combined Mexican Working Party on the basis of 1940 average prices for each of the three groups.

[2] Value of catch on beach. Values of shrimp and other exported species are not comparable to export values shown in table 59, which shows the value of the processed catches at the port of export as corrected by the Bank of Mexico.

TABLE 58

FISHERIES

Fishing fleet, 1941-1949

	1941	1942	1943	1944	1945	1946	1947	1948	1949
Number and net tonnage of registered fishing vessels									
Number of vessels	*3,548*	*4,056*	*4,264*	*4,832*	*4,910*	*5,749*	*4,865*	*5,213*	*5,580*
From 1 to 3 tons	3,185	3,463	3,510	3,934	4,015	4,712	3,928	4,183	4,562
From 3.1 to 10 tons	334	493	612	738	620	729	562	598	561
From 10.1 to 50 tons	29	97	141	158	260	296	350	385	407
From 50.1 to 100 tons	—	3	1	2	15	12	18	29	33
More than 100 tons	—	—	—	—	—	—	7	18	17
Index, 1941=100	100	114	120	136	138	162	137	147	157
Tonnage	*7,881*	*11,063*	*12,582*	*13,648*	*16,127*	*21,186*	*17,084*	*22,673*	*23,502*
From 1 to 3 tons	4,987	5,895	5,663	6,107	6,163	6,713	5,279	5,883	6,178
From 3.1 to 10 tons	2,317	3,054	3,872	4,784	3,936	4,697	3,213	3,281	3,478
From 10.1 to 50 tons	577	1,886	2,987	2,633	5,206	9,006	6,422	8,033	9,008
From 50.1 to 100 tons	—	228	60	124	822	770	1,228	1,948	2,216
More than 100 tons	—	—	—	—	—	—	942	3,528	2,622[1]
Index, 1941=100	100	140	160	173	205	268	217	288	298

Source: Nacional Financiera, study on Mexican fisheries.

[1] In addition, rented foreign vessels of more than 100 tons totalled 816 tons in 1949.

TABLE 59

FISHERIES

Apparent consumption and exports, 1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
I. *APPARENT CONSUMPTION* (metric tons)		*16,342*	*21,220*	*20,938*	*21,812*	*31,489*	*39,491*	*44,968*	*45,863*	*52,979*	*49,195*	
Production		23,623	26,037	27,974	32,990	39,901	52,219	54,772	54,250	67,384	71,866	
+Imports		874	675	327	237	680	556	1,618	1,365	1,098	278	
—Exports		8,155	5,492	7,363	11,415	9,092	13,284	11,422	9,752	15,503	22,949	
Indices, 1940=100												
Production		100	110	119	140	169	221	232	230	286	305	
Exports		100	67	90	140	111	163	140	120	190	281	
Apparent consumption		100	130	128	133	193	242	275	281	324	301	
Average consumption per capita (kilograms)		0.831	1.050	1.014	1.031	1.453	1.776	1.974	1.957	2.196	1.982	
Index, 1940=100		100	126	122	124	175	214	238	236	264	238	
II. *EXPORTS OF MAIN SPECIES*												
Volume (metric tons)												
Shrimp	3,683	4,120	1,356	2,583	3,863	3,753	4,711	6,254	6,146	11,002	19,115	17,953
Lobster	470	537	810	563	956	474	493	813	737	979	845	927
Abalone	—	1,715	1,248	552	574	597	755	2,033	2,343	3,023	3,771	3,580
Sardine	—	—	—	—	2	—	580	136	391	681	347	57
Value (millions of pesos)												
Shrimp	2.5	3.6	1.2	2.7	9.7	11.9	15.1	20.1	25.5	64.9	144.0	159.1
Lobster	0.2	0.3	0.4	0.3	1.1	1.1	0.7	1.4	1.5	1.9	2.4	4.0
Abalone	—	1.7	1.7	0.7	0.9	1.1	1.4	5.8	6.5	7.8	12.8	11.4
Sardine	—	—	—	—	—	—	1.0	0.3	0.8	1.2	0.7	0.1

Source: Consumption, Nacional Financiera, study on Mexican fisheries. Exports of shrimp, information supplied by Bank of Mexico (corrected figures); exports of other species, uncorrected figures in Anuario Estadístico de Comercio Exterior (1939-1948) and Comercio Exterior de México (1949-1950).

TABLE 60

MINING

Production: volume and value, 1939-1951, and employment, 1939-1949

	1939		1940		1941		1942		1943		1944	
	Metric tons	Millions of pesos	Metric tons	Millions of pesos	Metric tons	Millions of pesos	Metric tons	Millions of pesos	Metric tons	Millions of pesos	Metric tons	Millions of pesos
I. *PRODUCTION*												
Precious metals	*2,386*	*300.1*	*2,597*	*321.9*	*2,462*	*269.1*	*2,665*	*291.4*	*2,706*	*290.6*	*2,302*	*246.0*
Gold	26	144.9	27	164.5	25	136.0	25	131.8	20	102.1	16	85.5
Silver	2,360	155.2	2,570	157.4	2,437	133.1	2,640	159.6	2,686	188.5	2,286	160.5
Industrial non-ferrous metals	*416,196*	*290.4*	*374,470*	*318.7*	*386,907*	*346.4*	*483,484*	*457.0*	*529,335*	*489.7*	*504,182*	*452.0*
Copper	44,390	52.7	37,602	51.5	48,716	56.4	50,897	63.8	49,774	62.7	41,300	52.0
Lead	219,506	125.4	196,253	122.6	155,259	102.1	197,019	135.6	218,126	152.7	185,282	129.1
Zinc	134,166	79.0	114,955	91.1	154,996	128.7	189,873	176.4	197,199	183.4	218,965	203.6
Antimony	7,873	10.8	12,267	20.8	11,132	16.9	11,695	17.9	13,682	21.1	10,930	16.9
Bismuth	164	2.0	185	2.7	98	1.3	128	1.7	175	2.3	165	2.2
Cadmium	817	6.5	816	8.3	907	9.0	854	8.9	802	8.1	682	6.9
Manganese	547	0.1	1,696	0.5	979	0.3	11,493	3.6	22,945	8.7	29,070	11.3
Mercury	254	3.6	402	10.9	798	20.1	1,117	31.0	976	27.0	795	13.8
Arsenic	7,063	2.4	9,268	3.6	12,844	5.0	18,520	7.9	20,301	8.9	15,306	6.6
Tin	294	1.7	351	2.1	216	1.1	370	2.1	433	2.4	332	1.8
Molybdenum	872	4.5	516	2.9	870	4.2	1,426	6.9	1,897	9.1	1,195	5.7
Tungsten	109	1.2	103	1.5	91	1.2	92	1.2	245	3.2	160	2.1
Others	141	0.5	57	0.2	1	—	—	—	2,780	0.2	—	—
Graphite	*9,815*	*1.0*	*12,327*	*1.4*	*16,928*	*1.5*	*20,816*	*2.1*	*20,677*	*2.4*	*12,977*	*1.6*
Iron[1]	*104,800*	*12.5*	*94,300*	*12.8*	*98,100*	*14.2*	*126,200*	*20.1*	*161,300*	*23.2*	*200,100*	*30.2*
Coal	*876,851*	*14.9*	*815,907*	*13.9*	*855,697*	*17.2*	*914,269*	*19.2*	*1,025,326*	*21.5*	*904,198*	*19.0*
II. *EMPLOYMENT*[4]	49,704		48,403		52,158		51,245		53,400		49,776	
Index, 1939=100	100		97		105		103		107		100	

TABLE 60 (continued)

MINING

Production: volume and value, 1939-1951, and employment, 1939-1949

	1945 Metric tons	1945 Millions of pesos	1946 Metric tons	1946 Millions of pesos	1947 Metric tons	1947 Millions of pesos	1948 Metric tons	1948 Millions of pesos	1949 Metric tons	1949 Millions of pesos	1950 Metric tons	1950 Millions of pesos	1951[2] Metric tons
I. *PRODUCTION*													
Precious metals	*1,916*	*232.9*	*1,359*	*241.1*	*1,844*	*286.3*	*1,800*	*306.5*	*1,551*	*398.7*	*1,630*	*436.2*	*1,220*
Gold	16	84.0	13	70.8	14	78.1	11	73.9	13	117.3	13	123.7	11
Silver	1,900	148.9	1,346	170.3	1,830	208.2	1,789	232.6	1,538	281.4	1,617	312.5	1,209
Industrial non-ferrous metals	*522,928*	*475.0*	*371,165*	*386.8*	*514,052*	*783.0*	*471,884*	*993.2*	*491,227*	*1286.9*	*550,957*	*1511.3*	*526,767*
Copper	61,680	78.3	61,053	94.6	62,492	145.8	59,076	162.7	57,246	198.5	61,701	243.9	67,312
Lead	205,315	143.7	140,143	114.8	223,135	345.1	193,317	430.0	220,764	577.6	238,076	578.9	238,490
Zinc	209,940	195.2	139,535	133.3	195,814	230.9	179,029	324.6	178,402	401.8	220,704	587.1	178,719
Antimony	8,754	13.6	6,572	10.6	6,928	23.2	7,380	31.4	5,753	37.5	5,867	30.5	6,882
Bismuth	161	2.2	76	1.2	255	5.3	161	3.5	309	11.3	263	10.3	761
Cadmium	1,053	10.7	717	8.6	779	14.6	906	21.2	820	31.0	686	29.7	884
Manganese	18,542	7.6	11,342	4.6	14,182	4.6	24,014	8.8	23,772	14.9	14,461	10.2	17,970
Mercury	567	11.5	402	5.8	334	4.1	165	2.1	181	3.4	127	2.5	231
Arsenic	15,713	6.5	9,649	4.6	9,686	6.2	7,571	5.5	3,577	3.6	8,587	9.5	15,131
Tin	177	1.0	267	1.5	174	1.4	135	2.1	364	6.5	445	7.5	315
Molybdenum	781	3.8	1,364	6.6	227	1.1	—	—	—	—	22	.7	—
Tungsten	64	0.8	45	0.6	46	0.7	80	1.3	39	0.8	18	0.4	73
Others	181	0.1	—	—	—	—	—	—	—	—	—	—	—
Graphite	*23,634*	*2.8*	*21,949*	*2.6*	*27,984*	*3.5*	*35,261*	*9.9*	*23,813*	*11.1*	*24,627*	*13.0*	*34,075*
Iron[1]	*243,500*	*33.6*	*243,000*	*35.2*	*267,100*	*39.6*	*283,600*	*41.7*	*311,000*	*45.0*	*347,000*	*49.5*	*370,000*[3]
Coal	*914,614*	*19.2*	*977,874*	*20.5*	*1040,360*	*21.8*	*1057,226*	*41.2*	*1074,707*	*41.9*	*911,732*	*36.3*	*
II. *EMPLOYMENT*[4]	40,499		40,793		41,763		40,974		41,322				
Index, 1939=100	82		82		84		83		83				

Source: Ministry of National Economy, Reports for 1947/48 and 1949/50. For 1950 and 1951, information supplied by the Ministry. The original source of these statistics is the Ministry of Finance and Public Credit, where the information is gathered in connection with payments of production taxes on metals.

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*Not available.

[1] The figures for iron production of the Ministry of National Economy have not been utilized, since they appear to be much too low when compared with pig iron production and exports of iron ore. The figures in this table are the sum of the production of pig iron and the metallic content of iron ore exported.

[2] Annual rate of production based on output in the first five months of the year.

[3] Pig iron production and exports were not available for any part of 1951. This figure is based on the official figure for the first five months of 1951, on the assumption that the same relation exists in 1951 as in 1950 between the official and the corrected figure.

[4] Dirección General de Estadística.

TABLE 61

MINING

Indices of Volume of Output 1936-39 to 1951

	1936-39 Average	1940-45 Average	1947-50 Average	1950	1951[1]
Precious metals	*100*	*91*	*60*	*58*	*45*
Gold	100	84	50	50	41
Silver	100	98	68	65	49
Industrial non-ferrous metals	*100*	*108*	*113*	*121*	*120*
Copper	100	119	148	152	166
Lead	100	82	94	102	102
Zinc	100	118	127	145	117
Others	100	158	100	90	130
Antimony	100	135	77	69	81
Bismuth	100	92	150	160	462
Cadmium	100	124	117	100	129
Manganese	100	3,530	4,770	3,610	4,490
Mercury	100	345	90	56	103
Arsenic	100	172	83	96	172
Tin	100	96	90	137	97
Molybdenum	100	123	11	2	0
Tungsten	100	191	70	27	111
Graphite	100	175	273	241	334
Iron[2]	*100*	*147*	*288*	*331*	*353*
ALL METALS	*100*	*100*	*88*	*92*	*85*
Coal	*100*	*80*	*90*	*81*	*
ALL MINERALS	*100*	*99*	*88*	*91*	*

Source: Indices have been computed by the Combined Mexican Working Party on the basis of the information in table 60 and corresponding information for 1936-38. For all groups which include more than one mineral, indices represent the value for each period (1936-39 = 100) in terms of average prices for the period 1936-1939. The years 1936-1939 have been selected as a base instead of the year 1939 in order to avoid erratic annual fluctuations. The year 1946 has not been included in the post-war period because of the considerable decline in production in that year, which was due to the shift from the war to a peace economy, and accordingly had little relevance for the future.

[1] Annual rate of production based on output in the first five months of the year.

[2] Since corrected production figures for 1936-38 were not available, 1939 was used as the base year for the index on the volume of iron production. The 1939 prices used are mineral prices.

*Not available.

TABLE 62

MINING

Apparent Domestic Consumption for Certain Industrial Metals[1]

1939-1950

(Thousands of metric tons)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
Copper	—0.1	0.7	2.3	4.0	2.4	3.6	6.8	18.0	10.7	8.9	8.0	9.9
Lead	12.4	23.6	1.8	20.7	18.9	7.0	23.0	—27.8	35.7	14.0	42.3	—6.9
Zinc	10.9	—0.3	7.1	12.7	9.6	20.4	7.0	9.6	8.5	56.2	15.2	16.6
Manganese	1.6	3.1	1.3	0.2	0.6	1.0	0.7	0.5	1.3	1.4	2.4	2.4
Tin	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.3	0.5	0.4	*	*

Source: Production, table 60. Imports: for 1939-48, Anuario Estadístico del Comercio Exterior; for 1949-50, Bank of Mexico. Exports: Ministry of Finance and Public Credit.

*Not available.

[1] Apparent domestic consumption = Production + imports − exports. For all other industrial nonferrous metals, domestic consumption is negligible.

TABLE 63

MINING

Income, Profits and Taxes in the Mining Industry, 1939-1949
(millions of pesos)

	1939		1944		1946		1949	
	millions of pesos	%	millions of pesos	%	millions of pesos	%	millions of pesos	%
I. *INCOME AT FACTOR COST*	*278.6*	*100.0*	*369.6*	*100.0*	*451.4*	*100.0*	*945.9*	*100.0*
Wages and salaries	*155.0*	*55.6*	*213.1*	*57.7*	*255.6*	*56.6*	*397.7*	*42.0*
Mixed income	*9.5*	*3.4*	*11.4*	*3.1*	*10.9*	*2.4*	*16.1*	*1.7*
Profits	*114.1*	*41.0*	*145.1*	*39.2*	*184.9*	*41.0*	*532.1*	*56.3*
Taxes	*62.7*	*22.5*	*91.8*	*24.8*	*115.7*	*25.6*	*260.2*	*27.5*
Production taxes, federal and local	41.8	15.0	65.8	17.8	83.1	18.3	140.8	14.9
Federal income tax[1]	19.3	6.9	20.2	5.5	25.6	5.7	97.5	10.3
Tax on dividends[2]	—	—	4.1	1.1	5.2	1.2	19.9	2.1
Property tax	1.6	0.6	1.7	0.4	1.8	0.4	2.0	0.2
Net profits after taxation	*51.4*	*18.4*	*53.3*	*14.4*	*69.2*	*15.4*	*271.9*	*28.8*
II. *PROFITS*	*114.1*	*100.0*	*145.1*	*100.0*	*184.9*	*100.0*	*532.1*	*100.0*
Taxes	62.7	55.0	91.8	63.2	115.7	62.6	260.2	48.9
Net profits after taxation	51.4	45.0	53.3	36.8	69.2	37.4	271.9	51.1
III. *VALUE OF FOREIGN INVESTMENTS IN MINING*[3]	964.0		586.0		500.0		970.0	
IV. *NET PROFITS AFTER TAXATION IN RELATION TO VALUE OF FOREIGN INVESTMENTS (%)*		5.3		9.1		13.8		28.1
MINING:—Income, Profits and Taxes in the Mining Industry, 1939-49								

Source: Bank of Mexico and Ministry of Finance.

[1] It has been assumed that the mining enterprises were in the above years paying on the average an income tax rate of 25% of their profits after deduction of production taxes. This rate corresponds to average taxable profits of 1 million pesos. This assumption appears reasonable since no enterprise, however large its taxable income, was subject to more than a 30% tax. Since most enterprises probably belonged to groups with taxable incomes of more than 500,000 pesos, they paid tax rates between 20 and 30%. In 1949, an excess profits tax was introduced, yielding in that year a revenue of 44 million pesos from all kinds of taxable enterprises. The share paid by the mining industry, however, must have been small, and has been omitted from this table.

[2] The tax on dividends introduced in 1943 is a flat rate of 8% on about 85% of the profits remaining, after deduction of the production income and excess profits taxes. The 15% allowance on the taxable profits is for reinvested profits (10%) and increase in legal reserves (5%).

[3] No estimates of the value of capital invested in mining are available. In this table, the value of foreign investments, which is a high proportion of the total, has been used as a substitute. The sources utilized are the U. S. Department of Commerce and the Bank of Mexico. The U. S. investment data of the Department of Commerce have been adjusted upward on the basis of data of the Bank of Mexico.

TABLE 64

PETROLEUM INDUSTRY
Petróleos Mexicanos
Investment and Financing, 1938-1951
(millions of pesos)

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1938-50	1951
I. *INVESTMENT*[1]															
Refineries	2.9	2.4	4.4	14.5	12.0	7.3	16.0	80.8	74.8	24.4	58.8	46.4	22.6	367.1	*
Oil pipelines[2]	—	9.3	16.0	—	—	—	—	—	—	—	—	29.0	40.5	94.8	11.5
Gas pipelines[2]	—	—	—	—	—	—	—	—	—	3.0	30.7	20.7	13.0	67.4	*
Fields	2.2	5.8	22.1	2.0	5.8	8.0	8.1	9.5	13.7	17.6	27.7	78.0	164.2	364.6	*
Wells	1.3	3.1	4.6	4.5	1.7	4.0	8.8	9.6	9.6	13.7	19.4	35.8	60.1	176.3	*
Shipping	0.5	0.6	7.5	0.1	4.6	0.2	—0.4	5.1	5.8	3.3	3.9	4.4[3]	57.9[3]	93.5	*
Rolling stock	—	1.6	0.3	0.2	0.7	2.5	0.3	0.4	—	1.2	0.3	3.2	3.4	14.2	*
Urban construction[4]	0.1	0.1	0.3	0.2	0.3	0.5	1.3	1.5	1.9	17.3	4.6	3.7	7.5	39.3	*
Department of domestic sales	0.4	1.1	2.0	2.9	2.8	3.8	5.6	6.1	5.5	4.7	5.1	10.8	3.1	53.9	*
Department of marine	—	—	—	—	0.3	0.2	0.9	0.3	—0.2	0.1	0.6	0.7	2.0	5.1	*
Miscellaneous	0.1	—	—	—	—	—	—	—	—	—	8.4	0.1	—	8.6	*
Total	*7.5*	*24.1*	*57.3*	*24.4*	*28.3*	*26.5*	*40.6*	*113.4*	*111.1*	*85.3*	*159.5*	*232.7*	*374.3*	*1,285.0*	*395.0*[6]
Investment in wells by contractors[5]	—	—	—	—	—	—	—	—	—	—	8.0	14.0	24.0	46.0	30.0
Grand Total	*7.5*	*24.1*	*57.3*	*24.4*	*28.3*	*26.5*	*40.6*	*113.4*	*111.1*	*85.3*	*167.5*	*246.7*	*398.3*	*1,331.0*	*425.0*
II. *FINANCING*[7]															
Reserves and other company funds	7.5	24.1	57.3	24.4	28.3	26.5	40.6	73.1	20.6	85.3	159.5	232.7	374.3	1,154.2	395.0
Domestic loans[8]	—	—	—	—	—	—	—	—	82.5	—	—	—	—	82.5	—
Foreign loans[9]	—	—	—	—	—	—	—	40.3	8.0	—	—	—	—	48.3	—
Contractors	—	—	—	—	—	—	—	—	—	—	8.0	14.0	24.0	46.0	30.0
Total	*7.5*	*24.1*	*57.3*	*24.4*	*28.3*	*26.5*	*40.6*	*113.4*	*111.1*	*85.3*	*167.5*	*246.7*	*398.3*	*1,331.0*	*425.0*

Source: Petroleos Mexicanos, except for investment in wells by contractors, which has been estimated by the Combined Mexican Working Party.

*Not available.

[1] Expenditures for ordinary repairs and maintenance are not included in the investment. Such expenditures cannot be separated from other operational costs, and it proved impossible to make any estimate of their amount. Investments of private companies, which account for 3 to 4% of total petroleum production, are not included.

[2] Includes investment in the main oil and gas pipelines built from 1938 to 1950. The minor oil and gas pipelines are included under "refineries."

[3] In 1948 a provision of funds was made for a major repair of the petroleum fleet. In the statement supplied by Pemex this provision appears as an investment in 1948, and the writing off of the funds in 1949 and 1950, when the repairs were carried out, as a disinvestment. In this Table the actual expenditures for repairs in 1949 and 1950 have been regarded as investment.

[4] The Combined Mexican Working Party has deducted 10% from this item, as furnished by Pemex. This deduction corresponds to purchases of real estate as estimated by Pemex.

[5] Investments of American contractors in the drilling of wells are not included in the investment figures supplied by Pemex. The Combined Mexican Working Party has made an approximate estimate of these investments, based on the assumption, that they are equivalent to 40% of Pemex's own investment in drilling. Some increase over the 1950 level has been assumed for 1951.

[6] No estimate of investment in 1951 was available. However, in information supplied to the Combined Mexican Working Party, Pemex stated that investment would be considerably higher than the budget estimate of 237 million pesos. A slight increase over the 1950 level has been assumed.

[7] Information supplied by Pemex, except financing by contractors, which is estimated by Combined Mexican Working Party (cf. footnote 5).

[8] Two bond issues of 23.5 million pesos and 59.0 million pesos respectively.

[9] Export-Import Bank loan of $9.95 million for the refinery "18 de Marzo."

TABLE 65

PETROLEUM INDUSTRY
Petróleos Mexicanos
Data on Capacity and on Drilling, 1938-1951

	Distillation capacity				Cracking capacity
	1938	1946	1949	1950	1950
I. *REFINING CAPACITY* (Barrels per working day)					
Refineries					
Poza Rica, Ver.	—	4,000	4,000	4,000	—
Mata Redonda, Ver.	9,200	10,100	10,100	15,000	8,000
Arbol Grande, Tamps.	13,300	21,000	22,000	22,000	—
Minatitlán, Ver.	31,100	24,000	24,000	24,000	—
Atzcapotzalco, D. F.	12,600	24,000	50,000	50,000	14,500
Ciudad Madero, Tamps.	49,600	55,000	71,000	75,000	5,500
Bellavista, Ver.	1,700	—	—	—	—
Salamanca, Gto.	—	—	—	30,000	5,000
Reynosa, Tamps.	—	—	—	4,000	—
Total	*117,500*	*138,100*	*181,100*	*224,000*	*33,000*
Index, 1938=100	*100*	*118*	*154*	*191*	

II. *TRANSPORTATION AND STORAGE CAPACITY*

	1938		1950	
	Number	Capacity (barrels)	Number	Capacity (barrels)
Tank cars	738	161,528	1,883	426,352
Tank trucks	295	4,996	560	25,796
Storage (plants and storage tanks)	1,003	1.376,974	1,031	1.836,211
	1938		1950	
	Length (kilometers)	Barrels per day	Length (kilometers)	Barrels per day
Oil pipelines	1,717	664,400	2,539	948,400
		Cubic feet per day		Cubic feet per day
Gas pipelines	372	100.000,000	819	510.000,000[1]

	Number of units	Gross Tonnage (tons)	Capacity (barrels)	Number of units	Gross Tonnage (tons)	Capacity (barrels)
Tankers	147[2]	36,122	181,884	175[3]	168,065	1.452,820

III. *WELL DRILLING*

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
Drilling (total number of wells)	*34*	*28*	*37*	*22*	*16*	*21*	*34*	*52*	*49*	*51*	*82*	*162*	*223*	
For exploration	*2*	*1*	—	*1*	*2*	*3*	*4*	*10*	*11*	*19*	*38*	*27*	*17*	
Productive wells	1	—	—	—	—	—	—	3	2	4	15	3	6	
Unproductive wells	1	1	—	1	2	3	4	7	9	15	23	24	11	
For operation	*32*	*27*	*37*	*21*	*14*	*18*	*30*	*42*	*38*	*32*	*44*	*135*	*206*	
Productive wells	17	17	21	12	8	10	24	27	29	24	30	96	131	
Unproductive wells	15	10	16	9	6	8	6	15	9	8	14	39	75	
Drilling equipment (number of units)	19	19	19	22	22	24	27	27	27	27	33	44	72	116
Linear meters drilled (thousands)	27.3	35.2	39.7	23.4	17.9	29.8	47.4	74.1	76.9	90.3	131.4	204.4	273.2	

Source: Petróleos Mexicanos.

[1] The gas pipeline of 340 kilometers under construction between Monterrey and Torreón, with a daily capacity of 100,000,000 cubic feet, is not included.

[2] Includes only one large tanker.

[3] Includes 18 large tankers.

TABLE 66

PETROLEUM INDUSTRY

Petróleos Mexicanos

Production, Domestic Consumption, Exports and Imports of Petroleum, 1938-1951

															Annual averages		
	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1940-1945	1946-1950	1940-1950
Production of crude petroleum (millions of barrels per year)	*38.5*	*42.9*	*44.0*	*43.0*	*34.8*	*35.2*	*38.2*	*43.5*	*49.2*	*56.3*	*58.5*	*60.9*	*72.4*	*75.9*[1]			
Index 1939=100	89.7	100.0	102.7	100.4	81.2	82.0	89.1	101.5	114.8	131.2	136.4	142.0	168.9	177.1			
Annual rate of increase (%)	—	11.5	2.7	—2.2	—19.1	1.0	8.7	13.9	13.1	14.3	4.0	4.1	18.9	4.9	0.2	10.7	4.9
Production of refined petroleum (millions of barrels per year)	*33.7*	*31.8*	*29.9*	*35.7*	*33.8*	*35.4*	*37.7*	*41.7*	*46.4*	*51.2*	*49.7*	*54.6*	*55.9*	*57.8*[3]			
Index 1939=100	106.1	100.0	94.1	112.2	106.4	111.4	118.4	131.0	145.8	161.0	156.3	171.9	175.7	181.8			
Annual rate of increase (%)	—	—5.7	—5.9	19.2	—5.2	4.7	6.3	10.6	11.3	10.4	—2.9	10.0	2.2	3.5	4.6	6.1	5.3
Domestic consumption of petroleum[2] (millions of barrels per year)	*21.7*	*22.4*	*24.1*	*26.0*	*27.9*	*32.3*	*33.6*	*36.2*	*40.6*	*45.8*	*48.1*	*53.3*	*58.5*	*64.9*[4]			
Domestic sales of Pemex	17.1	18.4	19.3	21.0	23.1	26.0	27.5	29.7	33.5	36.8	39.8	44.6	47.3				
Consumption of Pemex	2.9	3.0	3.1	3.2	3.4	4.7	4.3	4.4	3.9	4.5	4.1	4.2	4.5				
Imports of refined petroleum	1.7	1.0	1.7	1.8	1.4	1.6	1.8	2.1	3.2	4.5	4.2	4.5	6.7				
Index for domestic consumption 1939=100	96.9	100.0	107.6	116.1	124.6	144.2	150.0	161.6	181.2	204.5	214.7	237.9	261.2	289.9			
Annual rate of increase (%)	—	3.2	7.6	7.9	7.3	15.7	4.0	7.7	12.1	12.9	5.0	10.8	11.0	11.0	8.3	10.1	9.1
Exports (millions of barrels per year)	*14.0*	*16.4*	*18.7*	*15.8*	*6.3*	*5.8*	*5.0*	*8.1*	*9.5*	*14.0*	*13.1*	*14.2*	*23.6*				
Crude petroleum	4.6	8.6	8.6	7.6	3.1	1.4	0.7	2.4	3.3	6.7	7.2	7.2	16.4				
Refined petroleum	9.4	7.8	10.1	8.2	3.2	4.4	4.3	5.7	6.2	7.3	5.9	7.0	7.2				
Imports (millions of barrels per year)	*1.9*	*1.3*	*2.0*	*2.0*	*1.5*	*1.7*	*1.9*	*2.2*	*3.3*	*4.6*	*4.3*	*4.6*	*6.7*				
Crude petroleum	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	—				
Refined petroleum	1.7	1.0	1.7	1.8	1.4	1.6	1.8	2.1	3.2	4.5	4.2	4.5	6.7				
Balance of petroleum trade Exports—Imports (millions of barrels per year)	*12.1*	*15.1*	*16.7*	*13.8*	*4.8*	*4.1*	*3.1*	*5.9*	*6.2*	*9.4*	*8.8*	*9.6*	*16.9*				
Crude petroleum	4.4	8.3	8.3	7.4	3.0	1.3	0.6	2.3	3.2	6.6	7.1	7.1	16.4				
Refined petroleum	7.7	6.8	8.4	6.4	1.8	2.8	2.5	3.6	3.0	2.8	1.7	2.5	0.5				

Source: Petróleos Mexicanos.

[1] Estimated on the basis of production during the first half of the year.

[2] Domestic consumption has been estimated as the sum of domestic sales of Pemex, petroleum consumed by Pemex, and imports of refined petroleum. Information on domestic sales and on imports has been obtained directly from Pemex, and information on the consumption of Pemex in 1941-50 from an unpublished study of the Economic Commission for Latin America in Mexico "*La Energía en México*". Consumption of Pemex in 1938-40 has been estimated on the basis of consumption in later years.

[3] Estimated by Pemex.

[4] Estimated on basis of the same annual rate of increase (11%) as in 1950.

TABLE 67

PETROLEUM INDUSTRY

Petróleos Mexicanos

Production of Crude Petroleum by Oil Fields, 1938-1951

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951[1]
Production (thousands of barrels per year)	*38,466*	*42,889*	*44,043*	*43,042*	*34,826*	*35,150*	*38,197*	*43,546*	*49,240*	*56,290*	*58,520*	*60,897*	*72,443*	*75,948*
Ebano-Pánuco	5,384	5,525	6,210	6,041	3,690	3,162	3,637	5,295	8,647	10,059	10,237	9,190	8,810	8,508
Faja de Oro	4,244	4,630	3,779	5,612	3,862	6,504	8,314	10,060	8,524	7,835	7,716	7,746	9,030	7,568
Istmo	6,750	6,332	5,614	5,938	5,130	4,766	5,227	5,242	5,842	6,431	6,074	6,451	7,040	7,758
Poza Rica	22,088	26,402	28,440	25,451	22,144	20,718	21,019	22,949	26,217	31,952	34,408	36,945	46,938	51,372
Noreste	—	—	—	—	—	—	—	—	10	13	85	565	625	742
Percentage of Total Production	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*
Ebano-Pánuco	14	13	14	14	11	9	9	12	18	18	17	15	12	11
Faja de Oro	11	11	9	13	11	18	22	23	17	14	13	13	12	10
Istmo	18	15	13	14	15	14	14	12	12	11	10	10	10	10
Poza Rica	57	61	64	59	63	59	55	53	53	57	59	61	65	68
Noreste	—	—	—	—	—	—	—	—	—	—	—	1	1	1

Source: Petróleos Mexicanos.

[1] Estimated on the basis of production during the first half of the year.

TABLE 68

PETROLEUM INDUSTRY

Petróleos Mexicanos

Production and Consumption of Natural Gas, 1939-1951

													Annual averages		
	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1940-1945	1946-1950	1940-1950
Production of natural gas (millions of cubic meters per year)	*1,019*	*1,049*	*1,054*	*980*	*823*	*896*	*954*	*941*	*1,124*	*1,185*	*1,327*	*1,827*			
Equivalent of gas production in millions of barrels of petroleum (1,000 cubic meters=7.355 barrels)	7.5	7.7	7.8	7.2	6.1	6.6	7.0	6.9	8.3	8.7	9.8	13.4			
Index of gas prod. 1939=100	100.0	103.0	103.5	96.3	80.8	88.0	93.7	92.4	110.3	116.3	130.3	179.4			
Annual rate of increase (%)	—	3.0	0.5	—7.0	—16.1	8.9	6.5	—1.4	19.4	5.4	12.0	37.7	—1.1	13.8	5.5
Consumption of natural gas[1] (millions of cubic meters per year)	*600*	*553*	*535*	*481*	*465*	*534*	*590*	*542*	*775*	*1,093*	*1,123*	*1,266*			
Equivalent of gas consumption in millions of barrels of petroleum (1,000 cubic meters=7.355 barrels)	4.4	4.1	3.9	3.5	3.4	3.9	4.3	4.0	5.7	8.0	8.3	9.3			
Index of gas cons. 1939=100	100.0	92.1	89.1	80.1	77.4	88.9	98.3	90.2	129.1	182.0	187.1	211.0			
Annual rate of increase (%)	—	—7.9	—3.3	—10.1	—3.4	14.9	10.6	—8.2	43.1	41.0	2.8	12.8	—0.3	16.5	7.0
Consumption as percentage of production (%)	58.9	52.7	50.8	49.1	56.5	59.6	61.8	57.6	69.0	92.2	84.6	69.3			
Production of crude petroleum and consumption of natural gas in petroleum equivalents (millions of barrels per year)	*47.3*	*48.1*	*46.9*	*38.3*	*38.6*	*42.1*	*47.8*	*53.2*	*62.0*	*66.5*	*69.2*	*81.7*			
Index 1939=100	100.0	101.7	99.2	81.0	81.6	89.0	101.1	112.5	131.1	140.6	146.3	172.7			
Annual rate of increase (%)	—	1.7	—2.5	—18.3	0.7	9.1	13.6	11.3	16.5	7.2	4.1	18.0	0.2	11.3	5.1

Source: Petróleos Mexicanos.

[1] The difference between production and consumption is represented by gas burned and lost. A minor part of the gas consumed is used by Pemex for reinjection in wells and for the operation of refineries. Deliveries to absorbtion plants represent the major part of the consumption. Information on sales of gas from the absorbtion plants is not available.

TABLE 69

ELECTRIC POWER

Installed Capacity, Generation and Consumption, 1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
I. *INSTALLED CAPACITY*												
Total (thousands of KW)	*680.5*	*680.7*	*680.7*	*682.5*	*680.1*	*709.0*	*719.6*	*893.4*	*957.5*	*1,040.1*	*1,096.9*	*1,290.0*[1]
Public service	479.0	479.2	479.2	481.0	479.6	508.5	519.1	673.0	704.1	786.6	807.5	960.0[2]
Private service	148.4	148.4	148.4	148.4	145.7	145.7	145.7	165.7	190.3	190.3	193.7	234.0[2]
Mixed service	53.0	53.0	53.0	53.0	54.8	54.8	54.8	54.8	63.2	63.2	95.8	96.0[2]
Federal Electricity Commission	0.4	0.6	1.0	2.5	2.5	31.3	35.0	44.3	75.7	111.4	133.7	171.4
Mexican Light and Power Co.	255.6	255.9	253.6	253.6	253.6	278.6	278.6	278.6	303.6	313.9	334.5	378.5
New Chapala Electric Co.	24.2	24.2	24.2	29.2	29.2	29.2	29.2	38.2	38.2	48.2	48.2	100.2
American and Foreign Power Co. subsidiaries	160.8	160.8	160.8	160.8	160.8	161.6	162.5	166.7	168.2	187.5	201.2	201.2
Others	239.5	239.2	241.1	236.4	234.0	208.3	214.3	365.6	371.8	379.1	379.3	438.7
Index of total capacity (1939=100)	100.0	100.0	100.0	100.3	99.9	104.2	105.7	131.3	140.7	152.8	161.2	189.6
Percentage annual increase[3]	—	—	—	0.3	—0.4	4.3	1.4	24.2	7.2	8.6	5.5	17.6
II. *POWER GENERATED*												
Total (millions of KWH)	*2,462.0*	*2,528.9*	*2,524.2*	*2,625.1*	*2,738.6*	*2,750.3*	*3,068.5*	*3,317.3*	*3,598.5*	*3,968.7*	*4,328.4*	*4,423.5*
Hydroelectric	1,617.7	1,698.4	1,652.5	1,937.7	1,891.5	1,721.3	2,091.7	2,121.1	2,077.8	2,329.4	2,085.3	1,949.5
Thermal	844.3	830.5	871.7	687.4	847.0	1,029.1	976.7	1,196.2	1,520.7	1,639.3	2,243.2	2,474.0
Public service	2,065.3	2,135.7	2,101.4	2,170.7	2,259.4	2,274.5	2,498.9	2,710.1	2,871.1	3,208.5	3,513.5	3,549.5
Private service	396.6	393.2	422.8	454.3	479.1	475.8	569.6	607.2	727.4	760.2	814.9	874.0
Federal Electricity Commission	0.1	0.3	0.4	1.0	4.1	69.1	204.0	253.5	283.3	392.8	577.2	438.1
Mexican Light and Power Co.	1,083.2	1,119.6	1,063.9	1,091.5	1,129.2	1,071.5	1,106.6	1,266.6	1,322.0	1,487.2	1,590.8	1,663.0
New Chapala Electric Co.	116.0[2]	117.5	116.0	113.8	142.8	150.8	164.9	175.6	164.3	182.7	190.0	196.7
American and Foreign Power Co. subsidiaries	640.0[2]	640.0[2]	650.6	690.6	723.9	713.3	705.5	753.5	811.1	848.1	874.4	961.0
Others	622.7	651.5	693.3	728.2	738.6	745.6	887.5	868.1	1,017.8	1,057.9	1,096.0	1,164.7
Index of total power generated (1939=100)	100.0	102.7	102.5	106.6	111.2	111.7	124.6	134.7	146.2	161.2	175.8	179.7
Percentage annual increase[4]	—	2.7	—0.2	4.0	4.3	0.4	11.6	8.1	8.4	10.3	9.0	2.2

III. *CONSUMPTION* (millions of KWH)												
Total power generated	2,462.0	2,528.9	2,524.2	2,625.1	2,738.6	2,750.3	3,068.5	3,317.3	3,598.5	3,968.7	4,328.4	4,423.5
Consumption of power generated domestically[5]	2,177.9	2,254.7	2,252.2	2,326.5	2,450.9	2,456.9	2,692.3	2,853.2	3,078.1	3,318.6	3,821.5	4,061.9
Imports	18.8	21.0	22.3	27.6	40.2	48.6	58.8	71.9	89.5	107.0	128.9	124.6
Total consumption	2,196.7	2,275.7	2,274.5	2,354.1	2,491.1	2,505.5	2,751.1	2,925.1	3,167.6	3,425.6	3,950.4	4,186.5
Index of total power consumption (1939=100)	100.0	103.6	103.5	107.2	113.4	114.1	125.2	133.2	144.2	160.5	179.8	190.6
Percentage annual increase	—	3.6	—0.1	3.6	5.8	0.6	9.7	6.4	8.3	11.3	12.0	6.0
Percentage annual increase (excluding imports)[6]	—	3.5	—0.1	3.3	5.3	0.2	9.6	6.0	7.9	7.8	15.2	6.3
IV. *EMPLOYMENT*	9,800	10,270	10,658	10,849	11,305	12,186	12,044	12,983	14,009	14,709	16,474	*
Index of employment (1939=100)	100.0	104.8	108.8	110.7	115.4	124.3	122.9	132.5	142.9	150.0	168.1	*

Source: Federal Electricity Commission, Nueva Cia. Eléctrica de Chapala, Mexican Light and Power Co., and Cia. Impulsora de Empresas Eléctricas. (American and Foreign Power Co. subsidiaries).

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*Not available.

[1] Preliminary data. Includes estimate of capacity installed in second half of year. Total capacity as of June 30, 1950, was reported by the Federal Electricity Commission as 1,234,511 KW.

[2] Estimated.

[3] The average annual increase for the five-year period 1940-1944 was 0.8%; for the six-year period 1945-1950, 10.8%, and for the whole period 1940-1950, 6.3%.

[4] Average annual increases: 1940-1944, 2.2%; 1945-1950, 8.3%; 1940-1950, 5.5%.

[5] Total consumption, less imports.

[6] Average annual increase: 1940-1944, 2.5%; 1945-1950, 8.8%; 1940-1950, 5.9%.

TABLE 70

ELECTRIC POWER

Generating Capacity Installed, by States and Territories, 1943, 1950 and 1951

STATES	1943		June 30, 1950		June 30, 1951		Increases of more than 10,000 Kw. per plant
	000 Kw	%	000 Kw	%	000 Kw	%	
North Pacific	*38.7*	*5.7*	*85.7*	*6.9*	*103.7*	*7.4*	
Lower California (North & South)	6.3	0.9	9.7	0.8	11.1	0.8	
Nayarit	1.3	0.2	3.0	0.2	3.2	0.2	
Sinaloa	8.7	1.3	23.9	1.9	25.2	1.8	
Sonora	22.4	3.3	49.1	4.0	64.2	4.6	Cananea Copper Co., Cananea. Expansion of steam plant by 13,245 KW and Federal Electricity Commission; 15,000 KW steam plant in Ciudad Obregón.
North	*206.0*	*30.3*	*322.0*	*26.1*	*347.6*	*24.8*	
Coahuila	19.8	2.9	36.3	2.9	47.3	3.3	Altos Hornos, Monclova; 11,500 KW. steam plant.
Chihuahua	45.8	6.7	71.7	5.8	70.1	5.0	Federal Electricity Commission; 15,000 KW. steam plant in Ciudad Juárez.
Durango	34.8	5.1	66.0	5.4	68.1	4.9	Federal Electricity Commission; 25,000 KW. steam plant in Gómez Palacio.
Nuevo León	37.9	5.6	65.7	5.3	72.0	5.1	Monterrey Light and Power Co., 10,000 KW. steam plant.
San Luis Potosí	16.8	2.5	27.5	2.2	29.5	2.1	
Tamaulipas	27.0	4.0	30.8	2.5	36.1	2.6	
Zacatecas	23.9	3.5	23.9	1.9	24.5	1.8	
Center	*341.7*	*50.2*	*685.8*	*55.6*	*776.9*	*55.6*	
Aguascalientes	4.4	0.7	7.1	0.6	7.1	0.5	
Federal District	41.7	6.1	137.4	11.1	138.0	9.9	Mexican Light and Power Co. 50,000 KW. addition to steam plant in Nonoalco and 30,900 KW. to Diesel plant in Tacubaya.
Guanajuato	3.7	0.6	13.5	1.1	13.7	1.0	
Hidalgo	13.4	2.0	13.0	1.1	16.6	1.2	
Jalisco	32.5	4.8	73.1	5.9	112.1	8.0	Nueva Cía. Eléctrica Chapala, 51,200 KW-hydroelectric plant in Colimilla and 10,000 KW. steam plant in Zapopan.

México	29.5	4.3	112.5	9.1	154.6	11.0	Federal Electricity Commission; Miguel Alemán hydroelectric system; Ixtapantongo 56,000 KW.; Santa Bárbara 67,575.
Michoacán	76.7	11.3	118.7	9.6	124.5	8.9	Mexican Light and Power Co., 31,345 KW. expansion of Lerma hydroelectric plant.
Morelos	8.8	1.3	9.2	0.8	9.2	0.7	
Puebla	127.7	18.8	194.0	15.7	193.5	13.8	Mexican Light and Power Co., 65,000 KW. expansion of Necaxa hydroelectric plant.
Querétaro	2.2	0.3	6.4	0.5	6.6	0.5	
Tlaxcala	1.1	0.2	0.9	0.1	1.0	0.1	
Gulf	*84.2*	*12.4*	*119.6*	*9.7*	*141.5*	*10.0*	
Campeche	0.6	0.1	1.8	0.2	1.8	0.1	
Tabasco	0.7	0.1	1.3	0.1	1.7	0.1	
Veracruz	75.8	11.2	105.4	8.5	126.3	9.0	Federal Electricity Commission; 10,500 KW. steam plant in Veracruz and 14,400 KW. hydroelectric plant in Minas.
Yucatán	6.8	1.0	10.8	0.9	11.2	0.8	
Quintana Roo	0.2	—	0.2	—	0.5	—	
South Pacific	*9.4*	*1.4*	*21.4*	*1.7*	*30.7*	*2.2*	
Colima	0.9	0.1	1.8	0.1	1.8	0.1	
Chiapas	3.8	0.6	3.9	0.3	6.7	0.5	
Guerrero	0.7	0.1	8.7	0.7	13.8	1.0	
Oaxaca	4.0	0.6	7.1	0.6	8.4	0.6	
Totals	**680.1**	**100.0**	**1,234.5**	**100.0**	**1,400.4**	**100.0**	Sum of principal additions: 476,665 KW; thereof hydroelectric 285,520 and thermoelectric 191,145.

Sources: 1943, Dirección General de Electricidad; 1950 and 1951, Federal Electricity Commission.

Details may not add up to totals on account of rounding.

TABLE 71

ELECTRIC POWER

Investment and Financing of Four Major Enterprises, 1939-1952[1]

(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
I. *INVESTMENT*	*8.3*	*7.9*	*9.2*	*17.4*	*15.5*	*39.1*	*23.4*	*51.1*	*93.4*	*171.5*	*288.1*	*313.6*	*468.9*	*233.9*
Federal Electricity Commission	2.9	3.4	4.1	8.3	7.5	17.5	14.0	26.9	52.9	73.8	142.9	212.0	262.9	123.1
New Chapala Electric Co.	—	—	—	2.0	2.0	2.0	2.2	11.0	23.0	25.0	30.0	24.6	—	—
Mexican Light and Power Co.	5.4	4.5	5.1	5.7	4.8	17.1	4.8	7.0	10.1	35.0	102.6	74.0	206.0	110.8
Impulsora (American and Foreign Power Co. subsidiaries)	—	—	—	1.4	1.2	2.5	2.4	6.2	7.4	37.7	12.6	3.0	*	*
Public investment	2.9	3.4	4.1	10.3	9.5	19.5	16.2	37.9	75.9	98.8	172.9	236.6	262.9	123.1
Private investment	5.4	4.5	5.1	7.1	6.0	19.6	7.2	13.2	17.5	72.7	115.2	77.0	206.0	110.8
II. *FINANCING*	9.6	10.2	15.5	21.4	24.1	41.4	47.8	87.5	151.3	201.9	224.4	317.3	501.6	332.6
Government	*4.2*	*5.7*	*10.4*	*12.3*	*18.6*	*19.8*	*34.6*	*32.0*	*54.5*	*45.1*	*42.6*	*164.1*	*192.4*	*185.0*
Fiscal resources	4.3	5.7	6.3	9.2	16.6	20.2	34.9	15.7	42.8	70.4	86.1	186.7	192.4	185.0
Bond issues	—	—	4.1	3.4	2.5	—	—	16.4	13.6	—	—	—	—	—
Less: Loans by Federal Electricity Commission to other enterprises	—0.1	†	†	—0.3	—0.5	—0.4	—0.3	—0.1	—1.9	—25.3	—43.5	—22.6	*	*
Nacional Financiera														
Loans	—	—	—	—	—	—	—	*11.0*	*23.0*	*38.7*	*0.8*	*11.8*	*31.4*	*16.1*[2]
Federal Electricity Commission[3]														
Loans	—	—	—	—	—	—	—	—	—	*23.2*	*18.1*	—	—	—

	Reinvestment of earnings of enterprises[4]	*5.4*	*4.5*	*5.1*	*7.7*	*4.3*	*19.1*	*10.8*	*10.3*	*11.5*	*12.7*	*56.8*	*48.1*	*56.3*	*50.0*[2]
	External financing	—	—	—	*1.4*	*1.2*	*2.5*	*2.4*	*34.2*	*62.3*	*82.2*	*106.1*	*93.3*	*221.5*	*81.5*
	Eximbank	—	—	—	—	—	—	—	22.3	34.7	39.0	16.8	3.6	—	—
	IBRD	—	—	—	—	—	—	—	—	—	—	56.8	86.7	204.6	81.5
	Other credits	—	—	—	—	—	—	—	5.7	20.2	5.5	19.9	—	16.9	—
	Other resources[5]	—	—	—	1.4	1.2	2.5	2.4	6.2	7.4	37.7	12.6	3.0	*	*
	Summaries														
A	Domestic financing	9.6	10.2	15.5	20.0	22.9	38.9	45.4	53.3	89.0	119.7	118.3	224.0	280.1	251.1
	External financing	—	—	—	1.4	1.2	2.5	2.4	34.2	62.3	82.2	106.1	93.3	221.5	81.5
B	Public financing	4.2	5.7	10.4	14.3	18.6	21.8	40.9	68.6	113.6	146.9	137.7	275.7	428.4	282.6
	Private financing	5.4	4.5	5.1	7.1	5.5	19.6	6.9	18.9	37.7	55.0	86.7	41.6	73.2	50.0

Source: Tables 72, 73, 74 and 75.

†Less than 50,000 pesos.

*Not available.

[1] The four enterprises, data for which are included in this table, owned 66% of the total installed electric power capacity in Mexico and generated 74% of total power output and 92% of public power output in 1950. Of the total increase in installed capacity between 1939 and 1950, the four enterprises accounted for 67%.

[2] Estimated.

[3] The Federal Electricity Commission also granted loans for 53.8 million pesos to other enterprises, data for which are not included in this table.

[4] Including gross operating profit of the Federal Electricity Commission. Earnings reinvested by the Mexican Light and Power Co. may be overestimated by the inclusion in the data of some external financing.

[5] Financing of investments by Impulsora (American and Foreign Power Co. subsidiaries).

TABLE 72

ELECTRIC POWER

Comisión Federal de Electricidad

Investment, Financing and Other Data, 1939-1952

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
I. *INVESTMENT* (Million pesos)	*2.9*	*3.4*	*4.1*	*8.3*	*7.5*	*17.5*	*14.0*[6]	*26.9*[6]	*52.9*[6]	*73.8*[6]	*142.9*[6]	*212.0*	*262.9*[7]	*123.1*[7]
Hydroelectric plants, lines, etc.	2.9	3.3	4.0	8.1	6.4	14.6	9.2	18.1	28.4	47.7	80.2	115.1	*	*
Thermal plants, lines, etc.	†	0.1	0.1	0.2	1.1	2.9	4.8	8.8	8.5	11.1	33.3	57.0		
Inventories (Increase)[1]	*	*	*	*	*	*	*	*	16.0	15.0	29.4	39.9		
II. *FINANCING* (Million pesos)	*4.2*	*5.7*	*10.4*	*12.3*	*16.1*	*19.8*	*38.7*[6]	*63.3*[6]	*110.8*[6]	*104.2*[6]	*79.2*[6]	*215.7*	*295.6*	*221.8*
Federal Government	*4.3*	*5.7*	*10.4*	*12.6*	*16.6*	*20.2*	*34.9*	*32.1*	*56.4*	*84.1*	*73.6*	*165.7*	*192.4*	*185.0*
10% on consumption of electricity[2]	4.3	5.7	6.3	7.1	8.2	8.9	10.9	13.1	15.8	17.9	23.5	29.6	31.0	34.0
Subsidy	—	—	—	2.1	5.9	11.3	24.0	2.6	27.0	52.5	50.1	136.1	161.4	151.0
Internal loans	—	—	4.1	3.4	2.5	—	—	16.4	13.6	13.7[5]	—	—	—	—
External Financing	—	—	—	—	—	—	—	*28.0*	*54.9*	*44.5*	*46.5*	*62.8*	*103.2*	*36.8*
Eximbank	—	—	—	—	—	—	—	22.3	34.7	39.0	4.0	—	—	—
I. B. R. D.	—	—	—	—	—	—	—	—	—	—	22.6	62.8	86.3	36.8
Westinghouse	—	—	—	—	—	—	—	5.7	3.9	5.1	18.4	—	—	—
Aluminum Co.	—	—	—	—	—	—	—	—	3.4	—	—	—	—	—
General Electric	—	—	—	—	—	—	—	—	12.9	0.4	1.5	—	—	—
Chemical Bank Trust Co.	—	—	—	—	—	—	—	—	—	—	—	—	16.9	—
Gross Profits[3]	—	—	—	—	—	—	*4.1*	*3.3*	*1.4*	*0.9*	*2.6*	*9.5*	*	*
Enterprises—2%	—	—	—	—	—	—	—	—	—	—	—	*0.3*	*	*
TOTAL	*4.3*	*5.7*	*10.4*	*12.6*	*16.6*	*20.2*	*39.0*	*63.4*	*112.7*	*129.5*	*122.7*	*238.3*	*	*
Minus loans to other enterprises[4]	—0.1	†	†	—0.3	—0.5	—0.4	—0.3	—0.1	—1.9	—25.3	—43.5	—22.6	*	*
III. *OTHER DATA*														
Capacity in Operation (000 KW)	0.4	0.6	1.0	2.5	2.5	31.3	35.0	44.3	75.7	111.4	133.7	171.4	257.4	*
Increase	0.4	0.2	0.4	1.5	†	28.8	3.7	9.3	31.5	35.7	22.3	37.7	86.0	
Generation (Millions KWH)	0.1	0.3	0.4	1.0	4.1	69.1	204.0	253.5	283.3	392.8	577.2	438.1	*	

Source: Comisión Federal de Electricidad.

*Not available.

†Less than 50,000 pesos.

[1] Increase of the balances at the end of each year; not including revaluation as result of devaluation. Due to accounting practices items that should appear as work in process appear as inventory.

[2] Principally for bond service.

[3] Sales of electric power minus operation expenses.

[4] *Refaccionario* loans, especially to the Compañía Meridional, of the Mexican Light and Power system.

[5] Nacional Financiera; extension.

[6] In these years there is evidently a delay in accounting of new investment, and they are underestimated from 1945 to 1947 and overestimated in 1948 and 1949. The totals from 1945 to 1949 are: investment, 330.5 million pesos; financing, 386.2 million pesos.

[7] Budgeted expenditures; data as of July 19, 1951.

TABLE 73

ELECTRIC POWER

Compañía Impulsora de Empresas Eléctricas
(American and Foreign Power Co. subsidiaries)
Investment, Financing and Other Data, 1939-1951

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
I. *INVESTMENT*[1] (Millions of pesos)	—	—	—	*1.4*	*1.2*	*2.5*	*2.4*	*6.2*	*7.4*	*37.7*	*12.6*	*3.0*	*
Puebla-Veracruz System	—	—	—	0.4	0.2	0.5	0.6	0.9	1.4	9.1	2.7	—	
Guanajuato System	—	—	—	0.6	0.3	0.4	0.7	0.8	1.2	13.5	3.2	—	
Frank-Boquilla System	—	—	—	0.2	0.2	0.3	0.9	0.6	2.6	3.1	3.3	2.9	
Cía. Nal. de Electricidad-Zacatecas	—	—	—	—	—	—	—	†	†	0.2	0.1	†	
Cía. Nal. de Electricidad-Durango[2]	—	—	—	—	—	1.2	—	—	—	—	3.2	—	
Cía. Nal. de Electricidad-Saltillo[2]	—	—	—	—	—	—	—	1.6	—	4.0	—	—	
Cía. Nal. de Electricidad-Aguascalientes[2]	—	—	—	—	—	—	—	—	—	4.5	—	—	
Cía. Abastecedora de Luz-Mazatlán	—	—	—	—	—	—	—	0.1	1.6	0.3	0.1	0.1	
Cía. Eléctrica de Tampico	—	—	—	0.1	0.1	†	0.1	0.1	0.2	1.8	—	—	
Cía. de Electricidad de Mérida	—	—	—	0.1	0.4	0.1	0.1	2.1	0.4	1.2	—	—	
II. *FINANCING* (Millions of pesos)													
Private foreign capital	—	—	—	*1.4*	*1.2*	*2.5*	*2.4*	*6.2*	*7.4*	*37.7*	*12.6*	*3.0*	*
III. *OTHER DATA*													
Installed capacity (000 KW)	*160.8*	*160.8*	*160.8*	*160.8*	*160.8*	*161.6*	*162.5*	*166.7*	*168.2*	*187.5*	*201.2*	*201.2*	*201.2*
Puebla-Veracruz interconnected system	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	51.3	51.3	51.3	51.3
(Increase)	—	—	—	—	—	—	—	—	—	(7.5)	—	—	—
Guanajuato interconnected system	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	30.0	42.2	42.2	42.2
(Increase)	—	—	—	—	—	—	—	—	—	(7.5)	(12.2)	—	—
Frank-Boquilla interconnected system	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3	65.3
Other systems	29.2	29.2	29.2	29.2	29.2	30.1	31.0	35.2	36.7	41.0	42.5	42.5	42.5
(Increase)	—	—	—	—	—	(0.9)	(0.9)	(4.2)	(1.5)	(4.3)	(1.5)	—	—
(Total increase)	—	—	—	—	—	*(0.9)*	*(0.9)*	*(4.2)*	*(1.5)*	*(19.3)*	*(13.7)*	—	—
Power generated (Millions of KWH)	*	*	650.3	690.6	723.9	713.3	705.5	753.5	811.1	848.1	874.4	961.0	*

Source: Comisión de Tarifas de Electricidad y Gas (Electric Power and Gas Rates Commission), Ministry of Economy, and Cía. Impulsora de Empresas Eléctricas.

*Not available.

†Less than 50,000 pesos.

[1] Due to the fact that information could not be obtained directly, the data used are approximations based on the book value of gross additions to the rate base, excluding additions to inventory and maintenance charges. Source: Comisión de Tarifas de Electricidad y Gas, Ministry of Economy.

[2] Computed on the basis of expenditures per KW of installed capacity.

TABLE 74

ELECTRIC POWER

Mexican Light and Power Co.

Investment, Financing and Other Data, 1939-1956

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954 to 1956
I. *INVESTMENT*[1]																
(Million pesos)	*5.4*	*4.5*	*5.1*	*5.7*	*4.8*	*17.1*	*4.8*	*7.0*	*10.1*	*35.0*	*102.6*	*74.0*	*206.0*	*110.8*	*48.9*	*99.7*
Generating Plants																
Hydroelectric	0.3	0.6	0.2	0.2	0.2	1.3	0.9	0.1	0.3	1.2	0.4	26.1	*	*	*	*
Thermal	0.2	0.3	0.5	0.2	†	11.2	0.6	0.2	0.1	12.6	60.8	7.0				
Transmission and distribution	4.8	3.6	4.3	5.0	4.5	4.3	3.0	6.5	9.2	20.7	39.1	39.0				
General	0.1	†	0.1	0.3	0.1	0.2	0.2	0.2	0.4	0.6	2.2	1.9				
II. *FINANCING*																
(Million pesos)	*5.4*	*4.5*	*5.1*	*5.7*	*4.8*	*17.1*	*4.5*	*7.0*	*10.1*	*35.0*	*102.6*	*74.0*	*206.0*	*110.8*	*48.9*	*99.7*
Surplus and other company funds	5.4	4.5	5.1	5.7	4.8	17.1	4.5	7.0	10.1	11.8[2]	54.2[2]	38.3[2]	56.3	66.1	47.7	
Nacional Financiera —credit	—	—	—	—	—	—	—	—	—	—	0.8	11.8	31.4[3]			
CFE—credit	—	—	—	—	—	—	—	—	—	23.2	13.4	—	—			
IBRD—loan	—	—	—	—	—	—	—	—	—	—	34.2	23.9	118.3	44.7	1.2	

III. *OTHER DATA*																
Installed Capacity																
Generation (000 KW)	255.7	255.9	253.7	253.7	253.7	278.7	278.7	278.7	303.7	314.0	334.6	378.5	378.5	444.5	490.1	490.1
Increase	—	0.2	—2.2	—	—	25.0	—	—	25.0	10.3	20.6	43.9	—	66.0	45.6	—
Substations (000 KVA)	294.3	294.3	289.5	309.5	340.6	331.0	351.0	358.2	431.5	445.0	482.6	482.6	*	*		
Increase	—	—	—4.8	20.0	31.1	—9.6	20.0	7.2	73.3	13.5	37.6	—	—	—		
Distribution transformers (000 KVA)	142.2	147.0	150.0	157.5	158.8	165.1	172.0	179.7	193.1	212.6	236.6	258.0	*	*		
Increase	—	4.8	3.0	7.5	1.3	6.3	6.9	7.7	13.4	19.5	24.0	21.4	—	—		
Generation (million KWH)																
Generation and Purchase	1094	1149	1090	1113	1150	1146	1291	1473	1549	1768	1889	1790				
Generation	1083	1120	1063	1092	1129	1072	1107	1267	1322	1487	1591	1663				
No. of Consumers (000)	264	283	298	312	336	357	379	399	416	435	455	465				
Increase	—	19	15	14	24	21	22	20	17	19	20	10				
No. of Workers	3534	3900	4155	4140	4333	5117	4627	5032	5379	5810	6433	7074				
Wages and benefits (Million pesos)																
Operation	9.5	10.4	12.2	13.5	14.3	18.8	21.6	26.4	30.1	41.3	50.1	57.0				
Construction	1.2	1.1	1.1	1.1	1.8	3.4	2.8	3.2	4.5	5.7	7.5	5.8				

Source: Mexican Light and Power Co.

*Not available.

†Less than 50,000 pesos.

[1] Data given in Canadian dollars, converted to U.S. dollars at official rate, and to pesos at the average rate of each year.

[2] Calculated by difference; probably includes external and internal credits in 1949 and 1950.

[3] Balance of the credit line of 44 million pesos, under the assumption that it will be totally disbursed in 1951.

TABLE 75

ELECTRIC POWER

Nueva Compañía Eléctrica de Chapala
(New Electric Company of Chapala)
Investment, Financing and Other Data, 1939-1951

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
					(Millions of Pesos)								
I. *INVESTMENT*[1]													
Hydroelectric and thermal plants, transmission & distribution lines, etc.	*	*	*[2]	*2.0*[3]	*2.0*[3]	*2.0*[3]	*2.2*[3]	*11.0*	*23.0*	*25.0*	*30.0*	*24.6*	*[4]
II. *FINANCING*	*	*	*[2]	*2.0*[3]	*2.0*[3]	*2.0*[3]	*2.2*[3]	*11.0*	*23.0*	*25.0*	*30.0*	*24.6*	*
Capital: Federal Government	—	—	—	—	2.5[5]	—	—	—	—	—	12.5[5]	21.0[5]	—
Liabilities: Federal Government[6]	—	—	—	—	—	—	—	—	—	—	—	—	—
Loans: Nacional Financiera[7]	—	—	—	—	—	—	—	11.0	23.0	25.0	—	—	—
Comision Federal de Electricidad[8]	—	—	—	—	—	—	—	—	—	—	4.7	—	—
Eximbank[9]	—	—	—	—	—	—	—	—	—	—	12.8	3.6	—
Unexplained	—	—	—	2.0	—0.5	2.0	2.2	—	—	—	—	—	—
III. *OTHER DATA*													
Capacity (000 KW)													
Total	*	*	24.2	29.2	29.2	29.2	29.2	38.2	38.2	48.2	48.2	100.2	100.2
Annual increase	*	*	*	5.0	—	—	—	9.0	—	10.0	—	52.0	—
Generation (millions of KWH)	*	117.5	116.0	113.8	142.8	150.8	164.9	175.6	164.3	182.7	190.0	196.7	220.8
Electricity sold (millions of KWH)	*	*	60.9	*	90.0	100.2	114.9	115.7	111.1	120.8	126.2	134.0	155.0
Number of consumers (000)	31.5	32.5	35.5	36.9	39.1	42.9	47.1	50.4	52.5	55.7	58.7	60.7	61.2
Number of workers	353	*	358	*	467	*	530	*	616	*	700	*	—
Wages (millions of pesos)	*	*	*	*	*	*	*	2.6	2.7	3.4	3.7	4.4	—

Source: Nueva Compañía Eléctrica de Chapala, S.A. and Nacional Financiera.

*Not available.

[1] Hydroelectric (mainly Colimilla) and thermal plants; transmission and distribution lines, etc.

[2] Investments of 27.7 million pesos had been made up to 1941; no data are available on financing except for an increase of 3.0 million pesos in capital subscribed by the Federal Government.

[3] Data for 1942-1945 arbitrarily allocated by years.

[4] The 1951 increase in investment will be small.

[5] Shares subscribed by Federal Government; a negligible amount is held by the public. In 1949 capital was increased by 40 million pesos subscribed by the Federal Government; the figures for the partial use of this capital in 1949 and 1950 have been assumed to conform with the quantities noted.

[6] In 1942, 8% mortgage liabilities for 3.0 million pesos were issued with which the properties of the old Chapala Company owned by the Federal Government were purchased; in 1949, 40 million pesos of mortgage liabilities were issued, with which 1.9 million of the old issue were liquidated, and the credits referred to in note 7 were partially paid.

[7] It is evident that financing from 1946 to 1948 was carried out through credits and that the issue of mortgages bonds in 1949 was to liquidate these credits and finance 1950 investments. As of April 30, 1949, a debt of 54.5 million pesos was due to Nacional Financiera, of which 9.8 was due in dollars and the remainder in pesos. The Eximbank loan was also partially drawn upon in 1950.

[8] Loan from Comisión Federal de Electricidad for thermal plant.

[9] 2.1 million pesos were disbursed in 1948 (calculated at 5.76 pesos per dollar); 20.5 million in 1949 and 3.6 in 1950 (at 8.65 pesos per dollar). The 2.1 million pesos disbursed in 1949 and the 7.7 in 1950 are here taken as repayments of credits already used in 1949 through Nacional Financiera, as indicated in note 7.

TABLE 76

ELECTRIC POWER

Power Generation, 1934-1950

	Public service		Private service		Total generation	
	Millions of KWH	% increase	Millions of KWH	% increase	Millions of KWH	% increase
1934	1583	—	251	—	1834	—
1935	1753	10.7	311	23.9	2064	12.5
1936	1896	8.2	349	12.2	2245	8.8
1937	2093	10.4	387	10.9	2480	10.5
1938	2120	1.3	392	1.3	2512	1.3
1939	2065	—2.6	397	1.3	2462	—2.0
1940	2136	3.4	393	—1.0	2529	2.7
1941	2101	—1.6	423	7.6	2524	—0.2
1942	2171	3.3	454	7.3	2625	4.0
1943	2259	4.1	479	5.5	2738	4.3
1944	2274	0.7	476	—0.7	2750	0.4
1945	2499	9.9	570	19.7	3069	11.6
1946	2710	8.4	607	6.5	3317	8.1
1947	2871	5.9	727	19.8	3598	8.4
1948	3209	11.8	760	4.5	3969	10.3
1949	3513	9.5	815	7.2	4328	9.0
1950	3549	1.0	874	7.2	4423	2.2
Average annual growth:						
1935-1939 (5 years)		5.6		9.9		6.2
1940-1944 (5 years)		2.0		3.7		2.2
1945-1950 (6 years)		7.8		10.7		8.3
1935-1950 (16 years)		5.3		8.3		5.7

Source: Federal Electricity Commission.

TABLE 77

Electric Power Consumption, 1943-1949

(Millions of KWH)

	1943		1945		1947		1948		1949		Increase 1949/1943
		%		%		%		%		%	%
TOTAL POWER CONSUMPTION[1]	*2056*	100.0	*2377*	100.0	*2823*	100.0	*3080*	100.0	*3468*	100.0	*68.7*
Residential	125	6.1	229	9.6	301	10.7	338	11.0	387	11.1	209.6
Commercial	115	5.6	149	6.3	206	7.3	232	7.5	263	7.6	128.7
Industrial	1483	72.1	1643	69.1	1904	67.4	2076	67.4	2305	66.5	55.4
Public consumption sources	(1004)	(48.8)	(1073)	(45.1)	(1177)[2]	(41.7)	(1316)[2]	(42.7)	(1490)[2]	(43.0)	48.4
Private consumption sources[3]	(479)	(23.3)	(570)	(24.0)	(727)	(25.7)	(760)	(24.7)	(815)	(23.5)	70.1
Agricultural	72	3.5	83	3.5	104	3.7	106	3.4	144	4.2	100.0
Public and government services	130	6.3	153	6.4	183	6.5	208	6.8	225	6.4	73.1
Miscellaneous	131	6.4	120	5.1	125	4.4	120	3.9	144	4.2	9.9

Sources: Dirección General de Electricidad, Ministry of Economy. Data for private consumption were obtained from the Federal Electricity Commission.

[1] Consumption of power generated for public use, which represented 63% of the total theoretical consumption of the country in 1943, 63% in 1947, 64% in 1948 and 67% in 1949. Power generated for private use has been included in the total figure on the assumption that it is equal to consumption. Data do not include re-sale of power.

[2] Includes special rate contracts, whatever the use of the power, supplies of high tension power (principally industrial) and cases where the user has to build at his own expense a part of the distribution installations and where, for this reason, special tariffs are applied. Data included for 1948 are estimated.

[3] Based on the assumption that it is used principally for industrial purposes.

TABLE 78

INDUSTRY

Production, Exports and Employment, 1939-1950

													Annual averages		
	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1940-1945	1946-1950	1940-1950
VOLUME OF PRODUCTION (Index 1939=100)	*100.0*	*105.1*	*121.2*	*138.3*	*145.8*	*157.0*	*171.2*	*174.6*	*169.7*	*183.2*	*199.4*	*228.1*			
Exports	100.0	122.4	194.1	449.0	704.9	607.8	975.2	905.4	710.1	461.5	394.3	392.0			
Production for the domestic market	100.0	104.8	119.9	133.0	136.1	149.2	157.3	162.0	160.3	178.4	196.0	225.2			
VOLUME OF PRODUCTION (Annual rate of increase (%))	—	*5.1*	*15.3*	*14.1*	*5.4*	*7.7*	*9.0*	*2.0*	*—2.8*	*8.0*	*8.8*	*14.4*	*9.4*	*5.9*	*7.7*
Exports	—	22.4	58.6	131.3	57.0	—13.8	60.4	—7.2	—21.6	—35.0	—14.6	—0.6	46.2	—16.7	13.2
Production for the domestic market	—	4.8	14.4	10.9	2.3	9.6	5.4	3.0	—1.0	11.3	9.9	14.9	7.8	7.4	7.7
VALUE OF PRODUCTION (Millions of pesos)	*2,113*	*2,421*	*2,999*	*3,890*	*5,392*	*6,317*	*7,583*	*9,514*	*10,161*	*11,642*	*13,328*	*16,794*			
Index 1939=100	100.0	114.6	141.9	184.1	255.2	299.0	358.8	450.2	480.8	550.9	630.7	794.7			
Annual rate of increase (%)	—	14.6	23.8	29.7	38.6	17.1	20.1	25.5	6.8	14.6	14.5	26.0	23.7	17.2	20.7
VALUE OF EXPORTS OF MANUFACTURES (Millions of pesos)	*36*	*43*	*72*	*111*	*244*	*288*	*452*	*498*	*386*	*490*	*435*	*386*			
Ratio of exports to value of production (%)	1.7	1.8	2.4	2.9	4.5	4.6	6.0	5.2	3.8	4.2	3.3	2.3	3.7	3.8	3.7
													Annual averages		
EMPLOYMENT													1940-1945	1946-1949	1940-1949
(Index 1939=100)	*100.0*	*105.9*	*114.6*	*126.9*	*138.9*	*146.5*	*151.8*	*159.7*	*155.4*	*168.4*	*178.6*	*			
Annual rate of increase (%)	—	5.9	8.2	10.7	9.5	5.5	3.6	5.2	—2.7	8.4	6.1	*	7.2	4.1	6.0

Sources: Volume and value of production, and employment: Bank of Mexico, Departamento de Estudios Económicos, Sección de Ingreso Nacional. Volume of exports: Economic Commission for Latin America. Value of exports: Table 130. Volume of production for domestic market: Computed by the Combined Mexican Working Party from the indices of volume of production of exports on the basis of the ratio of value of exports to value of total production in 1939.

TABLE 79

INDUSTRY

Industrial Investment, 1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Averages 1939-1944	Averages 1945-1950	Averages 1939-1950
Gross investment in industrial machinery and equipment[1] (Millions of pesos)..........	171	160	186	120	208	339	550	841	1,220	1,286	1,208	1,236			
Gross investment in industrial machinery and equipment in relation to gross domestic investment (%)....	26.3	20.7	19.2	11.9	16.3	19.6	24.2	25.8	29.7	28.3	23.6	20.8	19.0	25.4	22.2
Volume of gross investment in industrial machinery and equipment[2] (Index 1939=100)	100.0	111.4	123.3	76.2	162.0	249.9	330.1	376.0	469.5	389.6	296.2	271.0			
Annual rate of increase (%)	—	11.4	10.7	—38.2	112.6	54.3	32.1	13.9	24.9	—17.0	—24.0	—8.5			
Foreign direct investment in industry[3] (Millions of pesos)	5.2	4.2	12.5	12.1	19.3	33.2	76.2	51.7	70.7	56.0	123.9	*			
													Averages 1939-1944	Averages 1945-1949	Averages 1939-1949
Foreign direct investment in relation to gross investment in industrial machinery and equipment (%)	3.0	2.6	6.7	10.1	9.3	9.8	13.9	6.1	5.8	4.4	10.3	*	6.9	8.1	7.5

Sources: Combined Mexican Working Party and Bank of Mexico.

*Not available.

[1] Includes "Investment in industrial machinery and equipment" as shown in table 14, and investment of the Guanos and Fertilizer Company and the Anahuac Motor Company as shown in table 18.

[2] Index computed by Combined Mexican Working Party. As industrial machinery and equipment are largely imported, the relationship between foreign and domestic costs for imported capital goods (100:40) used in the estimates of private investment, was employed to determine the foreign and domestic components of the investment. The foreign component was deflated with a price index for imported capital goods (cf. Table 139), and the domestic component with an index of average salaries in manufacturing industries computed by the Bank of Mexico, Departamento de Estudios Económicos, Sección de Ingreso Nacional.

[3] Bank of Mexico. Includes capital movements and reinvested earnings, but excludes intercompany accounts.

TABLE 80

INDUSTRY

Textile Industry: Volume of Production. Volume and Value of Apparent Domestic Consumption, 1939-1950

													Averages		
	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1940-1945	1946-1950	1940-1950
Volume of production															
Indices (1939=100)															
General index[1]	*100.0*	*99.3*	*115.0*	*119.9*	*130.8*	*135.8*	*146.8*	*148.0*	*130.9*	*141.3*	*148.6*	*166.4*			
Cotton textiles[2]	100.0	101.8	122.7	131.4	148.0	151.1	163.8	164.9	146.5	157.5	162.7	186.0			
Woolen textiles[2]	100.0	94.3	96.4	100.5	100.6	110.5	112.4	116.9	102.6	95.2	107.5	108.7			
Silk and rayon textiles[2]	100.0	88.2	86.0	66.3	51.5	64.0	75.0	72.5	60.8	89.7	104.9	106.1			
Annual rate of increase (%)															
General	—	*—0.7*	*15.8*	*4.3*	*9.1*	*3.8*	*8.1*	*0.8*	*—11.6*	*7.9*	*5.2*	*12.0*	*6.6*	*2.5*	*4.7*
Cotton textiles	—	1.8	20.5	7.1	12.6	2.1	8.4	0.7	—11.2	7.5	3.3	14.3	8.6	2.6	5.8
Woolen textiles	—	—5.7	2.2	4.3	0.1	9.8	1.7	4.0	—12.2	—7.2	12.9	1.1	2.0	—0.7	0.8
Silk and rayon textiles	—	—11.8	—2.5	—22.9	—22.3	24.3	17.2	—3.3	—16.1	47.5	16.9	1.1	—4.7	7.2	0.5
Value of apparent domestic consumption[3] (millions of pesos)	*283.7*	*309.1*	*354.7*	*362.4*	*596.7*	*572.9*	*537.5*	*637.5*	*752.0*	*905.7*	*963.0*	*1,128.7*			
Production	258.5	282.9	320.7	372.5	628.5	604.5	676.2	802.9	783.7	885.2	962.2	1,162.0			
+Imports	26.5	28.6	40.6	44.6	54.7	58.9	69.1	107.5	141.1	116.6	90.0	91.2			
—Exports	1.3	2.4	6.6	54.7	86.5	90.5	207.8	272.9	172.8	96.1	89.2	124.5			
Exports in relation to production (%)	0.5	0.8	2.1	14.7	13.8	15.0	30.7	34.0	22.0	10.9	9.3	10.7			
Imports in relation to apparent domestic consumption (%)	9.3	9.3	11.4	12.3	9.2	10.3	12.9	16.9	18.8	12.9	9.3	8.1			

General price index for textiles[4] (1939=100)	100.0	108.6	109.2	118.4	154.2	171.8	180.4	208.8	234.6	249.4	257.2	285.2			
Volume of apparent domestic consumption[5]															
Indices (1939=100)															
Apparent domestic consumption	100.0	100.4	114.5	107.9	136.4	117.5	105.0	107.6	113.0	128.0	132.0	139.5	113.6	124.0	
Apparent per capita domestic consumption	100.0	99.2	110.0	101.4	125.1	105.2	91.7	91.7	93.6	103.0	103.2	105.5	105.4	99.4	
Annual rates of increase (%)															
Apparent domestic consumption	—	0.4	14.0	—5.8	26.4	—13.9	—10.6	2.5	5.0	13.3	3.1	5.7	0.8	5.8	3.1
Apparent per capita domestic consumption	—	—0.8	10.9	—7.8	23.4	—15.9	—12.8	0.0	2.1	10.0	0.2	2.2	—1.4	2.8	0.5

Source: Compiled by the Combined Mexican Working Party on the basis of data from the Oficina de Barómetros Económicos and the Dirección General de Estadística, Ministry of Economy.

[1] Index computed by Combined Mexican Working Party on the basis of the indices of the Oficina de Barómetros Económicos for the three branches of the industry, cotton textiles, woolen textiles, and silk and rayon textiles. The relative shares of the three branches in the total value of production of the industry in 1939 and 1950, as given by the Dirección General de Estadística, were used as weights as follows: cotton textiles 75%, woolen textiles 14%, silk and rayon textiles 11%.

[2] Indices of the Oficina de Barómetros Económicos, Ministry of Economy.

[3] Apparent domestic consumption = Production + Imports — Exports. Production: Revista de Estadística; includes cotton, woolen and silk and rayon textiles. Imports: Anuario Estadístico del Comercio Exterior; includes groups 41-42, 44-47, 50-51, 53-58. Exports: Anuario Estadístico del Comercio Exterior; includes groups 50, 55 and 56.

[4] Computed by the Combined Mexican Working Party on the basis of the indices of volume and value of production of the three branches of the industry according to data of the Oficina de Barómetros Económicos. After a price index was obtained for each branch, the general index was computed by using the relative value share of the three branches as weights (cf. footnote 1).

[5] Obtained by deflating the value of apparent domestic consumption with the price index described in footnote 4. The use of this price index as a deflator involves the assumption that exports and imports prices have behaved in a manner similar to prices of domestic production.

TABLE 81

INDUSTRY

Textile Industry: Gross Investment, 1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
Gross investment in textile machinery and equipment[1] (millions of pesos)	3.0	4.3	5.1	4.4	5.0	8.6	15.5	22.9	50.2	61.0	55.9	45.4
Investment in textile machinery and equipment in relation to total investment in industrial machinery and equipment[2] (%)	1.8	2.7	2.7	3.7	2.4	2.5	2.8	2.7	4.1	4.7	4.6	3.7

Source: Estimated by Combined Mexican Working Party on the basis of official import data.

[1] The estimate has been made on the basis of data on imports of machinery and equipment for the textile industry, for 1939, according to the Anuario Estadístico de Comercio Exterior and for 1940-50, according to the Comercio Exterior de México 1940-48 and 1950. The two groups of imports included are: *máquinas para cardar y tejer* and *accesorios para hilados, cardas, peines y mallas.* The import value was increased by 40% in order to allow for duties, transportation and costs of installation.

[2] Total investment in industrial machinery according to table 79.

TABLE 82

INDUSTRY

Iron and Steel Industry: Apparent Consumption of Iron and Steel, 1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
Volume and origin of apparent domestic consumption (Thousands of metric tons)												
Apparent domestic consumption	*212.2*	*218.4*	*229.8*	*199.6*	*243.1*	*376.0*	*422.7*	*537.1*	*607.7*	*455.9*	*571.3*	*618.2*
Production	131.6	130.1	131.7	132.5	126.0	142.5	203.9	268.3	300.2	249.1	366.4	367.6
Imports	80.6	88.3	98.1	67.1	117.1	233.5	218.8	268.8	307.5	206.8	204.9	250.6
Indices (1939=100)												
Apparent domestic consumption	*100.0*	*102.9*	*108.3*	*94.1*	*114.6*	*177.2*	*199.2*	*253.1*	*286.4*	*214.8*	*269.2*	*291.3*
Production	100.0	98.9	100.1	100.7	95.7	108.3	154.9	203.9	228.1	189.3	278.4	279.3
Imports	100.0	109.6	121.7	83.3	145.3	289.7	271.5	333.5	381.5	256.6	254.2	310.0
Origin of domestic consumption (%)												
Production	62.0	59.6	57.3	66.4	51.8	37.9	48.2	50.0	49.4	54.6	64.1	59.5
Imports	38.0	40.4	42.7	33.6	48.2	62.1	51.8	50.0	50.6	45.4	35.9	40.5

Source: Production: For 1939-48, Economic Commission for Latin America, Document E/CN.12/164/Annex K, May 1st, 1950, Desarrolo Industrial de Mexico. The production is estimated as sales of iron and steel of the two primary producers, Cia. Fundidora de Fierro y Acero de Monterrey, S.A. and Altos Hornos de Mexico, S.A., and the imports of iron ingot and scrap iron. For 1949-50, estimated by Combined Mexican Working Party on basis of increase in steel production over 1947. Imports: For 1939-42, Economic Commission for Latin America, Document E/CN.12/164/Annex K, May 1st, 1950, Desarrollo Industrial de Mexico. For 1943-50, Nacional Financiera, Annual report for 1951.

TABLE 83

INDUSTRY

Iron and Steel Industry: Capacity and Production, 1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
Pig Iron												
Capacity[1] (thousands of metric tons)	109.5	109.5	109.5	109.5	199.5[2]	367.2[3]	423.4	423.4	423.4	423.4	423.4	423.4
Production (thousands of metric tons)	99.2	92.1	95.5	122.2	158.7	158.8	210.4	240.3	235.7	175.7[4]	206.3	227.4
Production as percentage of capacity	90.6	84.1	87.3	111.6	79.5	43.2	49.7	56.8	55.7	41.5	48.7	53.7
Capacity (Index: 1939=100)	100.0	100.0	100.0	100.0	182.2	335.3	386.7	386.7	386.7	386.7	386.7	386.7
Production (Index: 1939=100)	100.0	92.8	96.3	123.2	160.0	160.1	212.1	242.2	237.6	177.1	208.0	229.2
Steel												
Capacity[5] (thousands of metric tons)	194.5	194.5	194.5	194.5	194.5	217.8	282.2	332.4	427.6	427.6	454.2	454.2
Production[6] (thousands of metric tons)	141.2	146.4	142.0	170.0	163.0	165.4	214.6	238.8	271.6	264.1	331.6	332.6
Production as percentage of capacity	72.6	75.3	73.0	87.4	83.8	75.9	76.0	71.8	63.5	61.7	73.0	73.2
Capacity (Index: 1939=100)	100.0	100.0	100.0	100.0	100.0	112.0	145.1	170.9	219.8	219.8	233.5	233.5
Production (Index: 1939=100)	100.0	103.7	100.6	120.4	115.4	117.1	152.0	169.1	192.4	187.0	234.8	235.6

Source: Nacional Financiera, Annual Report for 1951.

[1] The capacity is estimated as normal operational capacity. The maximum theoretical capacity in 1945-50 was 518,000 metric tons.

[2] In 1943, a new blast furnace of the Cia. Fundidora de Fierro y Acero de Monterrey, S.A., with an annual capacity of 182,500 metric tons, came into operation. Its capacity in this year has been estimated on the basis of 180 working days.

[3] In 1944, the blast furnace of the Altos Hornos de México, S.A., with an annual capacity of 131,400 metric tons came into operation. Its capacity in this year has been estimated on the basis of 209 working days.

[4] Production influenced by strikes.

[5] Normal operational capacity. Includes only the three principal producers, Cía. Fundidora de Fierro y Acero de Monterrey, S.A., Altos Hornos de México, S.A. and La Consolidada, S.A. The annual capacity of other producers was 77,400 metric tons in 1950.

[6] Includes only the three principal producers (cf. footnote 5).

TABLE 84

INDUSTRY

Cement Industry: Capacity, Production and Apparent Domestic Consumption of Cement, 1939-1950

													Annual averages		
	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1940-1945	1946-1950	1940-1950
Capacity (thousands of metric tons per year)	*	678.9	678.9	678.9	752.1	752.1	1,149.9	1,292.3	1,460.3	1,538.1	1,794.6	1,973.7			
Index (1940=100)[1]	*	100.0	100.0	100.0	110.8	110.8	169.4	190.4	215.1	226.6	264.3	290.7			
Annual rate of increase (%)	—	—	0.0	0.0	10.8	0.0	52.9	12.4	13.0	5.4	16.6	10.0	11.1	11.4	11.3
Production (thousands of metric tons per year)	409.8	485.0	537.5	560.4	596.7	623.8	808.3	878.8	998.9	1,080.2	1,177.0	1,388.0			
Index (1940=100)[1]	84.5	100.0	110.8	115.5	123.0	128.6	166.7	181.2	206.0	222.7	242.7	286.2			
Annual rate of increase (%)	—	18.3	10.8	4.2	6.5	4.6	29.6	8.7	13.7	8.1	9.0	17.9	12.0	11.4	11.7
Ratio of production to capacity (%)	*	71.4	79.2	82.5	79.3	82.9	70.3	68.0	68.4	70.2	65.6	70.3	77.6	68.5	73.5
Apparent domestic consumption (thousands of metric tons)	*414.2*	*488.4*	*540.8*	*566.8*	*639.6*	*693.2*	*917.3*	*1,034.2*	*1,070.9*	*1,049.9*	*1,172.7*	*1,369.7*			
Production	409.8	485.0	537.5	560.4	596.7	623.8	808.3	878.8	998.9	1,080.2	1,177.0	1,388.0			
+Imports	5.1	4.5	4.1	6.4	43.0	69.6	109.0	155.4	72.0	4.3	2.8	3.0			
—Exports	0.6	1.0	0.8	—	—	0.2	—	—	—	34.6	7.1	21.3			
Apparent domestic consumption (Index 1940=100)[1]	84.8	100.0	110.7	116.1	131.0	141.9	187.8	211.8	219.3	215.0	240.1	280.4			
Annual rate of increase (%)	—	17.9	10.7	4.7	12.8	8.3	32.3	12.8	3.5	—2.0	11.7	16.8	14.2	8.3	11.5
Ratio of exports to production (%)	0.1	0.2	0.1	—	—	—	—	—	—	3.2	0.6	1.6	0.1	1.1	0.5
Ratio of imports to apparent domestic consumption (%)	1.2	0.9	0.8	1.1	6.7	10.0	11.9	15.0	6.7	0.4	0.2	0.2	4.7	4.5	4.6
Number of plants	8	8	8	8	10	10	13	15	18	19	19	19			

Source: Capacity: Nacional Financiera, Annual report for 1951. Production: For 1939, Economic Commission for Latin America, Document E/CN.12/164/Annex K, 1 May 1950, Desarrollo Industrial de México. For 1940-50, Nacional Financiera, Annual report for 1951. Imports and exports: Comercio Exterior de México, 1939, 1940-48 and 1950. Number of plants: Nacional Financiera, Annual report for 1951.

[1] Because data on capacity are not available for 1939, all the indices have been calculated with 1940 as base year.

TABLE 85

INDUSTRY

Pulp and Paper Industry: Production, Imports, Exports and Apparent Domestic Consumption of Pulp, 1937, 1942 and 1946-1950

	1937	1939	1942	1946	1947	1948	1949	1950	Averages 1937-1946	 1946-1950	 1937-1950
Production (thousands of metric tons)	*18.6*	*	*24.2*	*27.0*	*51.1*	*60.2*	*65.0*	*68.0*			
Mechanical pulp	14.1	*	17.7	15.2	18.1	20.7	21.0	22.0			
Chemical pulp	4.5	*	6.5	11.8	33.0	39.5	44.0	46.0			
Production Index (1937=100)	*100.0*	*	*130.1*	*145.2*	*274.7*	*323.7*	*349.5*	*365.6*			
Mechanical pulp	100.0	*	125.5	107.8	128.4	146.8	148.9	156.0			
Chemical pulp	100.0	*	144.4	262.2	733.3	877.8	977.8	1,022.2			
Annual average rate of increase in production (%)									*4.2*	*26.0*	*10.5*
Mechanical pulp									0.8	9.7	3.5
Chemical pulp									11.3	40.5	19.6
Apparent domestic consumption (thousands of metric tons)	*54.6*	*	*64.8*	*76.1*	*81.3*	*90.3*	*91.7*	*120.9*			
Production	18.6	*	24.2	27.0	51.1	60.2	65.0	68.0			
+Imports	36.0	35.1	40.6	49.1	36.7	32.3	26.7	52.9			
—Exports	—	—	—	—	6.5	2.2	—	—			
Apparent domestic consumption Index (1937=100)	*100.0*	*	*118.7*	*139.4*	*148.9*	*165.4*	*167.9*	*221.4*			
Annual average rate of increase in apparent domestic consumption (%)									*3.8*	*12.3*	*6.3*
Imports in relation to apparent domestic consumption (%)	65.9	*	62.7	64.5	45.1	35.8	29.1	43.8			

Sources: Production: Various reports of the American Embassy in Mexico. The Embassy received its information directly from manufacturers. Imports and Exports: For 1937, Economic Commission for Latin America, Document E/CN.12/164/Annex K, 1 May 1950, Desarrollo Industrial de México. For 1939, 1942 and 1946-50 Comercio Exterior de México, 1939, 1940-48 and 1950.

*Not available.

TABLE 86

INDUSTRY

Pulp and Paper Industry: Production, Imports, Exports and Apparent Domestic Consumption of Paper, 1937, 1939, 1942 and 1946-1950

	1937	1939	1942	1946	1947	1948	1949	1950	Averages 1938-1946	Averages 1947-1950	Averages 1938-1950
Production (thousands of metric tons)											
Printing paper, other than newsprint	10.9	18.8	13.1	18.2	13.3	15.4	17.0	22.7			
Writing paper and other fine paper	9.1	3.6	10.4	10.3	14.8	18.5	21.0	9.2			
Coarse paper, including wrapping paper	20.1	26.8	22.6	33.6	34.9	49.8	52.0	70.6			
Other	4.4	4.4	1.8	5.7	7.6	10.1	11.0	14.0			
Total paper	44.6	53.6	48.0	67.7	70.7	93.8	101.0	116.5			
Paperboard	10.5	10.5	15.0	27.7	35.0	40.6	41.0	50.0			
Total paper and paperboard	55.0	64.1	63.0	95.4	105.7	134.4	142.0	166.5			
Production[1] Indices (1937=100)											
Paper	100.0	120.2	107.6	151.8	158.5	210.3	226.5	261.2			
Paperboard	100.0	100.0	142.9	263.8	333.3	386.7	390.5	476.2			
Paper and paperboard	100.0	116.5	114.5	173.5	192.2	244.4	258.2	302.7			
Annual average rate of increase in production (%)											
Paper									4.7	14.5	7.7
Paperboard									11.4	15.9	12.8
Paper and Paperboard									6.3	14.9	8.9

Apparent domestic consumption of paper (Thousands of metric tons)	*87.1*	*97.5*	*121.2*	*149.3*	*147.6*	*167.6*	*170.8*	*171.5*			
Newsprint (imports)	*30.2*	*30.1*	*55.7*	*56.3*	*56.6*	*62.3*	*59.1*	*39.7*			
Other paper	*56.9*	*67.4*	*65.5*	*93.0*	*91.0*	*105.3*	*111.7*	*131.8*			
Production	44.6	53.6	48.0	67.7	70.7	93.8	101.0	116.5			
+Imports	12.3	13.9	17.7	25.4	22.3	12.2	10.7	15.3			
—Exports	—	0.1	0.2	0.1	2.0	0.7	—	—			
Apparent domestic consumption of paper[1] Index (1937=100)	*100.0*	*111.9*	*139.2*	*171.4*	*169.5*	*192.4*	*196.1*	*196.9*			
Newsprint	100.0	99.7	184.4	186.4	187.4	206.3	195.7	131.5			
Other paper	100.0	118.5	115.1	163.4	159.9	185.1	196.3	231.6			
Annual average rate of increase in apparent domestic consumption of paper (%)									*6.2*	*3.5*	*5.3*
Newsprint									7.2	—8.3	2.1
Other paper									5.6	9.1	6.7
Imports in relation to apparent domestic consumption of paper (%)	*48.9*	*45.1*	*60.6*	*54.7*	*53.5*	*44.5*	*40.9*	*32.1*			
Newsprint	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0			
Other paper	21.6	20.6	27.0	27.3	24.5	11.6	9.6	11.6			

Sources: Production: For 1937, 1942, and 1946 to 1949, various reports of the American Embassy in Mexico. The Embassy received its information directly from manufacturers. For 1939 and 1950, Nacional Financiera, Annual Report for 1951. The figures from these sources may not be completely comparable, either as regards total production or classification. Imports and exports: For 1937, Economic Commission for Latin America, Document E/CN.12/164/Annex K, 1 May 1950, Desarrollo Industrial de México. For 1939, 1942, and 1946 to 1950, Comercio Exterior de México, 1939, 1940-48 and 1950.

[1] Unweighted volume indices.

TABLE 87

INDUSTRY

Chemical Industry: Value of Production, Exports, Imports and Apparent Domestic Consumption of Chemicals, 1940, 1944 and 1950

	1940	1944	1950
Apparent domestic consumption (millions of pesos)	*99.5*	*200.7*	*742.8*
Production	27.5	94.4	225.0
+Imports	85.3	147.0	562.6
—Exports	13.3	40.7	44.8
Apparent domestic consumption (Indices 1940=100)	*100.0*	*201.7*	*746.5*
Production	100.0	343.3	818.2
Imports	100.0	172.3	659.6
Exports	100.0	306.0	336.8
Imports in relation to apparent domestic consumption (%)	85.7	73.2	75.7
Exports in relation to production (%)	48.4	43.1	19.9
Number of establishments in the chemical industry	105	263	330

Sources: Production and number of establishments: Report of American Embassy in Mexico Number 339, October 2, 1950. The figures for 1940 and 1944 are based on the industrial census of 1940 and the industrial pre-census of 1944. The figures for 1950 are estimated by the U.S. Embassy. Exports and Imports: Anuario Estadístico de Comercio Exterior. Includes for 1950, section V of the uniform classification of foreign trade, and for 1940 and 1944, section III of the minimum classification list of the League of Nations, excluding natural fertilizer.

TABLE 89

INDUSTRY

Financing of Industry by Nacional Financiera, 1945-1950

	1945		1946		1947		1948		1949		1950	
	Millions of pesos	%	Millions of pesos	%	Millions of pesos	%	Millions of pesos	%	Millions of pesos	%	Millions of pesos	%
Securities in enterprises held and loans outstanding at end of year[1]	*199.1*	*100.0*	*227.7*	*100.0*	*338.1*	*100.0*	*433.6*	*100.0*	*492.2*	*100.0*	*596.1*	*100.0*
Sugar industry	18.4	9.2	26.2	11.5	92.6	27.4	147.5	34.0	162.2	32.9	156.8	26.3
Iron and steel industry	71.2	35.8	73.8	32.4	79.9	23.6	99.5	22.9	106.9	21.7	125.2	21.0
Fertilizer industry	10.0	5.0	10.0	4.4	10.5	3.0	10.9	2.5	39.1	7.9	52.3	8.8
Food industries, other than sugar industry	3.4	1.7	9.6	4.2	34.4	10.2	19.4	4.5	30.6	6.2	36.8	6.2
Pulp and Paper industry[2]	12.8	6.4	18.8	8.3	34.4	10.2	38.4	8.9	45.3	9.2	38.2	6.4
Textile industry	15.9	8.0	26.2	11.5	33.0	9.8	42.6	9.8	22.9	4.7	38.5	6.5
Metal products	3.9	2.0	4.1	1.8	4.7	1.4	7.4	1.7	4.3	0.9	28.7	4.8
Cement industry	9.8	4.9	11.9	5.2	13.2	3.9	22.2	5.1	19.5	4.0	21.0	3.5
Electric industry	23.0	11.6	24.5	10.8	3.8	1.1	9.9	2.3	15.6	3.2	14.6	2.4
Construction and materials[3]	26.9	13.5	12.1	5.3	16.5	4.9	16.4	3.8	21.9	4.4	51.7	8.7
Other industries[4]	3.8	1.9	10.5	4.6	15.1	4.5	19.4	4.5	23.9	4.9	32.3	5.4
Annual changes in securities held and in loans outstanding	*		*28.6*		*110.4*		*95.5*		*58.6*		*103.9*	
Ratio to total industrial investment (%)[5]	*		3.4		9.0		7.4		4.8		8.4	

Source: Nacional Financiera.

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*Not available.

[1] Besides securities held by the Nacional Financiera and its outstanding loans, this includes securities and loan obligations in the common funds (Fondos Communes) used to back Nacional Financiera's certificates of participation.

[2] Includes forestry products, since the one enterprise classified under this heading by the Nacional Financiera supplies the Atenquique Pulp and Paper factory.

[3] Besides the building materials industry, includes some securities in construction firms and loans to such firms.

[4] Besides the industries classified as "other industries" by the Nacional Financiera, includes chemical, glass, copper and tin and furniture industries.

[5] cf. Table 79.

TABLE 88

INDUSTRY

Sugar Industry: Production, Imports, Exports, and Domestic Consumption of Sugar, 1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Annual averages 1940-1945	Annual averages 1946-1950	Annual averages 1940-1950
I. *PRODUCTION*															
Volume (thousands of metric tons)	*420*	*384*	*448*	*535*	*543*	*523*	*514*	*535*	*650*	*777*	*800*	*740*			
White sugar	331	292	329	420	412	388	373	377	491	612	645	590			
Piloncillo[1]	89	92	119	115	131	135	141	158	159	165	155	150			
Indices (1939=100)	*100.0*	*91.4*	*106.7*	*127.4*	*129.3*	*124.5*	*122.4*	*127.4*	*154.8*	*185.0*	*190.5*	*176.2*			
White sugar	100.0	88.2	99.4	126.9	124.5	117.2	112.7	113.9	148.3	184.9	194.9	178.2			
Piloncillo	100.0	103.4	133.7	129.2	147.2	151.7	158.4	177.5	178.7	185.4	174.2	168.5			
Annual rates of increase (%)	—	*—8.6*	*16.7*	*19.4*	*1.5*	*—3.7*	*—1.7*	*4.1*	*21.5*	*19.5*	*3.0*	*—7.5*	*3.4*	*7.6*	*5.3*
White sugar	—	—11.8	12.7	27.7	—1.9	—5.9	—3.8	1.1	30.2	24.7	5.4	—8.6	2.0	9.6	5.4
Piloncillo	—	3.4	29.3	—3.4	13.9	3.1	4.4	12.1	0.7	3.7	—6.0	—3.3	8.0	1.2	4.9
II. *DOMESTIC CONSUMPTION*															
Volume (thousands of metric tons)	*414*	*451*	*477*	*531*	*559*	*583*	*597*	*592*	*578*	*671*	*718*	*706*			
White sugar	325	359	358	416	428	448	456	434	419	506	563	556			
Piloncillo[2]	89	92	119	115	131	135	141	158	159	165	155	150			
Indices (1939=100)	*100.0*	*108.9*	*115.2*	*128.3*	*135.0*	*140.8*	*144.2*	*143.0*	*139.6*	*162.1*	*173.4*	*170.5*			
White sugar	100.0	110.5	110.2	128.0	131.7	137.8	140.3	133.5	128.9	155.7	173.2	171.1			
Piloncillo	100.0	103.4	133.7	129.2	147.2	151.7	158.4	177.5	178.7	185.4	174.2	168.5			

Annual rates of increase (%)	—	*8.9*	*5.8*	*11.4*	*5.2*	*4.3*	*2.4*	*—0.8*	*—2.4*	*16.1*	*7.0*	*—1.7*	*6.3*	*3.4*	*5.0*
White sugar	—	10.5	—0.3	16.2	2.9	4.6	1.8	—4.8	—3.4	20.8	11.2	—1.2	5.8	4.1	5.0
Piloncillo	—	3.4	29.3	—3.4	13.9	3.1	4.4	12.1	0.7	3.7	—6.0	—3.3	8.0	1.2	4.9
Per capita consumption of white sugar and piloncillo (kilograms)	21.33	22.95	23.60	25.71	26.41	26.90	26.85	25.99	24.66	27.81	28.92	27.50			
Per capita consumption Index (1939=100)	100.0	107.6	110.6	120.5	123.8	126.1	125.9	121.8	115.6	130.4	135.6	128.9			
Per capita consumption Annual rate of increase (%)	—	7.6	2.8	9.0	2.7	1.9	—0.2	—3.3	—5.1	12.8	4.0	—4.9	3.9	0.5	2.3
III. *EXPORTS OF SUGAR* (thousands of metric tons)	6	—	—	—	—	—	—	—	—	*171*	*135*	*21*			
Exports in relation to production of white sugar (%)	1.8	—	—	—	—	—	—	—	—	27.9	20.9	3.6			
IV. *IMPORTS OF SUGAR* (thousands of metric tons)	—	—	*63*	—	*18*	*49*	*94*	*97*	—	—	—	—			
Imports in relation to consumption of white sugar (%)	—	—	17.6	—	4.2	10.9	20.6	22.4	—	—	—	—			

Sources: Production of white sugar: for 1939, Dirección de Economía Rural, Ministry of Agriculture and Livestock. For 1940-50, Unión Nacional de Productores de Azúcar. Production of *piloncillo*: for 1939-49, Dirección de Economía Rural, Ministry of Agriculture and Livestock. For 1950, estimate by Combined Mexican Working Party. Domestic consumption: for 1939, apparent consumption found by deducting exports from production. For 1940-50, Unión Nacional de Productores de Azúcar, production + imports — exports — net increase in stocks. Exports and imports: for 1939, Anuario Estadístico de Comercio Exterior. For 1940-50 Unión Nacional de Productores de Azúcar.

[1] Unrefined brown loaf sugar.

[2] Estimated as equal to production.

TABLE 91

TRANSPORTATION AND COMMUNICATIONS

Volume Indices, 1939-1950

(1939 = 100)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
General Index[1]	*100*	*101*	*104*	*117*	*135*	*144*	*143*	*157*	*158*	*155*	*180*	*206*
Railroads												
Freight: net ton-kilometers	100	102	107	123	142	144	140	144	146	149	153	165
Passengers: passenger-kilometers	100	105	111	128	167	200	189	167	161	150	156	167
Highways												
Freight: truck-kilometers	(100)	(100)	100	111	126	123	(138)	153	(163)	174	214	(250)
Passengers: bus-kilometers	(100)	(100)	100	100	118	125	(142)	160	(173)	186	231	(270)
Passengers: automobile-kilometers	(100)	(100)	100	95	97	84	(76)	69	(88)	107	135	(160)
Aviation												
Freight: tons of freight and express carried	100	92	108	137	150	139	200	253	361	524	766	921
Passengers: passenger-kilometers	100	119	330	324	507	617	893	1,271	1,446	1,599	1,657	1,813
Maritime transport												
Freight: total freight handled by ports	100	90	87	62	62	69	78	100	104	99	110	148
Passengers: total number of passengers using ports	100	94	79	62	71	80	76	63	55	53	44	39
Oil and gas pipelines												
Oil pipe-lines: daily capacity	100	(105)	(120)	(120)	(120)	(120)	(120)	(120)	(120)	(120)	(130)	143
Gas pipe-lines: daily capacity	100	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(130)	(340)	510
Communications												
Number of messages transmitted through national telegraph network	100	105	113	123	149	153	166	173	149	154	168	(175)
Number of cable messages transmitted	100	100	200	200	200	300	400	400	400	300	300	(300)
Domestic long distance conferences	(100)	(100)	100	110	135	160	180	205	230	255	265	345
International long distance conferences	(100)	(100)	100	100	117	133	150	167	167	333	333	833
Number of telephones	100	103	104	109	114	119	125	129	138	147	157	(157)

Source: Based on other tables in this report on transportation and communications.

NOTE: Figures shown in parentheses are estimates made by the Combined Mexican Working Party.

[1] Weighted general index calculated by the Combined Mexican Working Party. The weights used were established by relating freight items to railroad freight tonnage and passenger items to passengers carried by railroads, with each of the two railroad items having a weight of 100. For highway traffic, no tonnage figures were available, but it was estimated that each type of highway transportation had a weight of 50 in 1939 through 1942, was lower from 1943 to 1945 because of wartime shortages, and increased gradually beginning with 1946 to reach a weight equal to railroad traffic in 1950. In the case of communications, the weight for the number of telegraphic messages was estimated at 5, and other items related accordingly, except in the case of the number of telephone units, which was used as an indication of interurban communications with an estimated weight of 20. The general index includes the capacity of oil and gas pipelines and consequently differs somewhat from the index on the volume of transportation and communications shown in table 5, which excludes these items.

TABLE 90

TRANSPORTATION AND COMMUNICATIONS—SUMMARY

Gross investment and financing, 1939-1951
(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Total 1939-1950	%	1951[2]
A. GROSS INVESTMENT[1]	**215.6**	**250.3**	**315.2**	**377.5**	**434.3**	**486.7**	**635.5**	**961.0**	**1,143.6**	**1,057.8**	**1,239.1**	**1,707.4**	**8,824.0**	**100.0**	**1,693.1**
I. *ROAD TRANSPORTATION*	**93.2**	**105.0**	**188.3**	**210.7**	**205.1**	**217.5**	**297.8**	**581.0**	**615.3**	**552.1**	**651.7**	**778.1**	**4,495.8**	**50.9**	**946.5**
Highways:	*51.3*	*56.9*	*88.7*	*155.2*	*180.6*	*166.0*	*183.8*	*230.9*	*233.6*	*302.3*	*332.6*	*374.7*	*2,356.6*	*26.7*	*546.5*
Construction	45.2	48.5	75.5	138.5	156.0	142.3	150.1	194.5	195.8	264.0	283.3	323.7	2,017.4	22.9	489.1
Maintenance	6.1	8.4	13.2	16.7	24.6	23.7	33.7	36.4	37.8	38.3	49.3	51.0	339.2	3.8	57.4
Road transportation equipment	*41.9*	*48.1*	*99.6*	*55.5*	*24.5*	*51.5*	*114.0*	*350.1*	*381.7*	*249.8*	*319.1*	*403.4*	*2,139.2*	*24.2*	*400.0*
Importation of busses and trucks	33.4	33.9	73.8	41.0	13.1	30.3	73.7	258.8	289.2	143.5	193.8	230.6	1,415.1	16.0	240.0
Spare parts and maintenance	8.5	14.2	25.8	14.5	11.4	21.2	40.3	91.3	92.5	106.3	125.3	172.8	724.1	8.2	160.0
II. *RAILROAD TRANSPORTATION*	**98.5**	**101.8**	**106.2**	**135.5**	**192.3**	**231.1**	**287.3**	**318.0**	**445.8**	**379.4**	**393.2**	**654.4**	**3,343.5**	**37.9**	**596.9**
Tracks:	*54.6*	*54.0*	*55.7*	*70.4*	*91.3*	*141.4*	*157.4*	*198.0*	*219.7*	*223.7*	*232.0*	*335.7*	*1,833.9*	*20.8*	*376.9*
Construction and rehabilitation	22.6	18.0	20.6	31.3	32.4	53.0	51.4	73.8	96.7	92.4	91.9	195.3	779.4	8.8	224.4
Maintenance	32.0	36.0	35.1	39.1	58.9	88.4	106.0	124.2	123.0	131.3	140.1	140.4	1,054.5	12.0	152.5
Rolling stock	*43.9*	*47.8*	*50.5*	*65.1*	*101.0*	*89.7*	*129.9*	*120.0*	*226.1*	*155.7*	*161.2*	*318.7*	*1,509.6*	*17.1*	*220.0*
Additions	6.6	6.7	6.7	10.7	27.8	4.9	26.3	4.5	83.8	17.1	17.2	153.1	365.4	4.1	50.0
Maintenance	37.3	41.1	43.8	54.4	73.2	84.8	103.6	115.5	142.3	138.6	144.0	165.6	1,144.2	13.0	170.0
III. *AIR TRANSPORTATION*	*	**2.6**	**3.8**	**3.4**	**8.3**	**8.9**	**11.2**	**19.6**	**18.7**	**14.5**	**39.1**	**41.5**	**171.6**	**1.9**	**35.0**
Airports and ground equipment	*	*	*	*2.0*	*6.3*	*3.6*	*2.8*	*8.6*	*8.8*	*7.4*	*25.0*	*25.4*	*89.9*	*1.0*	*19.0*
Flight equipment	*	*2.6*	*3.8*	*1.4*	*2.0*	*5.3*	*8.4*	*11.0*	*9.9*	*7.1*	*14.1*	*16.1*	*81.7*	*0.9*	*16.0*
Importation of airplanes	*	1.8	2.6	0.4	0.2	1.2	1.1	2.8	0.9	1.4	2.4	1.4	16.2	0.2	2.0
Spare parts and maintenance	*	0.8	1.2	1.0	1.8	4.1	7.3	8.2	9.0	5.7	11.7	14.7	65.5	0.7	14.0
IV. *MARITIME TRANSPORTATION*	*3.2*	*12.3*	*5.1*	*15.5*	*17.5*	*17.1*	*25.2*	*23.8*	*20.3*	*36.1*	*44.0*	*141.4*	*361.5*	*4.1*	*44.4*
Ports	*2.6*	*4.8*	*5.0*	*10.9*	*17.3*	*17.1*	*20.1*	*18.0*	*17.0*	*32.2*	*39.6*	*83.5*	*268.1*	*3.0*	*44.4*
Construction and portworks	1.2	3.7	4.0	10.3	16.3	15.5	18.2	15.3	14.6	30.2	37.3	81.2	247.8	2.8	44.4
Maintenance (dredging)	1.4	1.1	1.0	0.6	1.0	1.6	1.9	2.7	2.4	2.0	2.3	2.3	20.3	0.2	*
Equipment															
Additions to Petróleos Mexicanos fleet	*0.6*	*7.5*	*0.1*	*4.6*	*0.2*	—	*5.1*	*5.8*	*3.3*	*3.9*	*4.4*	*57.9*	*93.4*	*1.0*	—
V. *PIPELINES AND GASLINES*	**9.3**	**16.0**	—	—	—	—	—	—	**3.0**	**30.7**	**49.7**	**53.5**	**162.2**	**1.8**	**11.5**
VI. *COMMUNICATIONS*	**11.4**	**12.6**	**11.8**	**12.4**	**11.1**	**12.1**	**14.0**	**18.6**	**40.5**	**45.0**	**61.4**	**38.5**	**289.4**	**3.3**	**58.8**
Telegraphy	*0.6*	*0.6*	*0.4*	*1.2*	*1.6*	*1.5*	*1.2*	*1.5*	*2.0*	*4.0*	*2.8*	*2.1*	*19.5*	*0.2*	*7.6*
Construction and equipment	0.1	0.2	0.1	0.5	1.0	0.7	0.5	0.6	1.0	2.8	1.6	1.3	10.4	0.1	7.6
Maintenance	0.5	0.4	0.3	0.7	0.6	0.8	0.7	0.9	1.0	1.2	1.2	0.8	9.1	0.1	*
Radiocommunication															
Construction and equipment	*0.1*	*0.2*	*0.2*	*0.5*	*0.4*	*1.3*	*1.2*	*1.7*	*1.2*	*7.2*	*7.2*	*1.1*	*22.3*	*0.3*	*11.2*
Telephones															
Construction and equipment	*10.7*	*11.8*	*11.2*	*10.7*	*9.1*	*9.3*	*11.6*	*15.4*	*37.3*	*33.8*	*51.4*	*35.3*	*247.6*	*2.8*	*40.0*
Summaries															
A. Construction and equipment	129.8	148.3	194.8	250.5	262.8	262.1	342.0	581.8	735.6	634.4	765.2	1,159.8	5,467.1	62.0	1,139.2
Maintenance and spare parts	85.8	102.0	120.4	127.0	171.5	224.6	293.5	379.2	408.0	423.4	473.9	547.6	3,356.9	38.0	553.9
B. Public investment	153.1	174.8	188.1	294.1	374.3	386.9	459.9	530.6	676.5	719.2	807.5	1,205.0	5,970.0	67.6	1,188.9
Private investment[3]	62.5	75.5	127.1	83.4	60.0	99.8	175.6	430.4	467.1	338.6	431.6	502.4	2,854.0	32.4	504.2
Ratios															
A. Gross investment in transportation and communications as percentage of gross national product	3.2	3.4	3.7	3.6	3.3	2.8	3.1	3.5	3.8	3.2	3.5	3.9			
B. Gross investment in transportation and communications as percentage of gross domestic investment	33.3	32.3	32.5	37.6	34.0	28.2	27.9	29.5	27.9	23.2	24.2	28.8			
C. Public investment in transportation and communications as percentage of total public investment	61.7	55.4	51.9	61.1	60.5	54.2	49.6	48.1	49.1	44.0	39.8	45.6			
D. Private investment in transportation and communications as percentage of total private investment	15.7	16.6	20.9	15.8	9.1	9.8	13.1	19.9	17.1	11.6	14.0	15.2			

TABLE 90—(Continued)

TRANSPORTATION AND COMMUNICATIONS—SUMMARY

Gross investment and financing, 1939-1951
(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Total 1939-1950	%	1951[2]
B. FINANCING[4]	**215.7**	**250.2**	**315.3**	**377.5**	**434.3**	**486.6**	**635.5**	**960.9**	**1,143.7**	**1,057.8**	**1,238.9**	**1,706.4**	**8,822.8**	**100.0**	**1,693.0**
I. ***ROAD TRANSPORTATION***	**93.3**	**104.9**	**188.4**	**210.7**	**205.1**	**217.4**	**297.8**	**580.9**	**615.4**	**552.1**	**651.5**	**777.1**	**4,494.6**	**50.9**	**946.4**
Domestic financing	*93.3*	*104.9*	*188.4*	*162.2*	*205.1*	*217.4*	*297.8*	*483.9*	*590.7*	*546.9*	*611.3*	*777.1*	*4,279.0*	*48.5*	*816.6*
Federal government	41.8	48.7	79.2	86.3	164.7	147.2	166.0	115.6	190.2	273.5	265.2	338.8	1,917.2	21.7	356.9
State governments	9.6	8.1	9.6	20.4	15.9	18.7	17.8	18.2	18.8	23.6	26.3	28.8	215.8	2.5	50.7
Private enterprises	41.9	48.1	99.6	55.5	24.5	51.5	114.0	350.1	381.7	249.8	319.8	409.5	2,146.0	24.3	409.0
External financing	—	—	—	*48.5*	—	—	—	*97.0*	*24.7*	*5.2*	*40.2*	—	*215.6*	*2.4*	*129.8*
II. ***RAILROAD TRANSPORTATION***	**98.5**	**101.8**	**106.2**	**135.5**	**192.3**	**231.1**	**287.3**	**318.0**	**445.8**	**379.4**	**393.2**	**654.4**	**3,343.5**	**37.9**	**596.9**
Domestic financing	*98.5*	*101.8*	*106.2*	*135.5*	*177.7*	*216.1*	*284.9*	*286.5*	*385.2*	*345.3*	*391.7*	*545.7*	*3,075.1*	*34.9*	*494.2*
Federal government	16.2	11.6	14.3	21.5	33.8	45.0	29.2	49.2	111.7	220.0	260.2	174.1	986.8	11.2	134.6
Resources of public agencies	81.6	79.9	88.6	97.3	133.1	154.7	173.7	180.4	157.3	144.7	220.5	256.1	1,767.9	20.0	310.0
Private enterprises	9.9	13.0	12.5	13.6	17.9	29.2	37.9	43.9	30.2	41.7	43.8	45.0	338.6	3.9	48.0
Credit	—9.2	—2.7	—9.2	3.1	—7.1	—12.8	44.1	13.0	86.0	—61.1	—132.8	70.5	—18.2	—0.2	1.6
External financing	—	—	—	—	*14.6*	*15.0*	*2.4*	*31.5*	*60.6*	*34.1*	*1.5*	*108.7*	*268.4*	*3.0*	*102.7*
III. ***AIR TRANSPORTATION***	*	**2.6**	**3.8**	**3.4**	**8.3**	**8.9**	**11.2**	**19.6**	**18.7**	**14.5**	**39.1**	**41.5**	**171.6**	**1.9**	**35.0**
Domestic financing	*	*2.6*	*3.8*	*3.4*	*8.3*	*8.9*	*11.2*	*19.6*	*18.7*	*14.5*	*39.1*	*41.5*	*171.6*	*1.9*	*35.0*
Federal government	—	—	—	—	—	—	—	—	1.5	2.1	8.0	15.7	27.3	0.3	11.5
Private enterprises	*	2.6	3.8	3.4	8.3	8.9	11.2	19.6	17.2	12.4	16.3	17.9	121.6	1.3	16.2
Credit	—	—	—	—	—	—	—	—	—	—	14.8	7.9	22.7	0.3	7.3
IV. ***MARITIME TRANSPORTATION***	**3.2**	**12.3**	**5.1**	**15.5**	**17.5**	**17.1**	**25.2**	**23.8**	**20.3**	**36.1**	**44.0**	**141.4**	**361.5**	**4.1**	**44.4**
Domestic financing	*3.2*	*12.3*	*5.1*	*15.5*	*17.5*	*17.1*	*25.2*	*23.8*	*20.3*	*36.1*	*44.0*	*141.4*	*361.5*	*4.1*	*44.4*
Federal government	2.6	4.8	5.0	10.9	17.3	17.1	20.1	18.0	17.0	32.2	39.6	83.5	268.1	3.0	44.4
Resources of public agencies	0.6	7.5	0.1	4.6	0.2	—	5.1	5.8	3.3	3.9	4.4	57.9	93.4	1.1	—
V. ***PIPELINES AND GASLINES***	**9.3**	**16.0**	—	—	—	—	—	—	**3.0**	**30.7**	**49.7**	**53.5**	**162.2**	**1.8**	**11.5**
Domestic financing															
Resources of public agencies	9.3	16.0	—	—	—	—	—	—	3.0	30.7	49.7	53.5	162.2	1.8	11.5
VI. ***COMMUNICATIONS***	**11.4**	**12.6**	**11.8**	**12.4**	**11.1**	**12.1**	**14.0**	**18.6**	**40.5**	**45.0**	**61.4**	**38.5**	**289.4**	**3.3**	**58.8**
Domestic financing															
Federal government	0.7	0.8	0.6	1.5	1.8	1.9	1.5	1.8	2.5	10.3	9.0	2.4	34.8	0.4	18.8
Private enterprises	10.7	11.8	11.2	10.9	9.3	10.2	12.5	16.8	38.0	34.7	52.4	36.1	254.6	2.9	40.0
Summaries															
A. Domestic financing	215.7	250.2	315.3	329.0	419.7	471.6	633.1	832.4	1,058.4	1,018.5	1,197.2	1,597.7	8,338.8	94.5	1,460.5
External financing	—	—	—	48.5	14.6	15.0	2.4	128.5	85.3	39.3	41.7	108.7	484.0	5.5	232.5
B. Federal Government	61.3	65.9	99.1	120.2	217.6	211.2	216.8	184.6	322.9	538.1	582.0	614.5	3,234.2	36.7	566.2
State governments	9.6	8.1	9.6	20.4	15.9	18.7	17.8	18.2	18.8	23.6	26.3	28.8	215.8	2.4	50.7
Resources of public agencies	91.5	103.4	88.7	101.9	133.3	154.7	178.8	186.2	163.6	179.3	274.6	367.5	2,023.5	22.9	321.5
Private enterprises	62.5	75.5	127.1	83.4	60.0	99.8	175.6	430.4	467.1	338.6	432.3	508.5	2,860.8	32.4	513.2
Credits	—9.2	—2.7	—9.2	3.1	—7.1	—12.8	44.1	13.0	86.0	—61.1	—118.0	78.4	4.5	0.1	8.9
External financing	—	—	—	48.5	14.6	15.0	2.4	128.5	85.3	39.3	41.7	108.7	484.0	5.5	232.5
Ratios															
A. Domestic financing as a percentage of total financing	100.0	100.0	100.0	87.2	96.6	96.9	99.6	86.6	92.5	96.3	96.6	93.6			86.3
Public financing	75.3	70.9	62.6	64.2	84.5	79.0	65.1	40.5	44.1	70.1	71.3	59.2			55.4
Private financing[5]	29.0	30.2	40.3	22.1	13.8	20.5	27.6	44.8	40.8	32.0	34.9	30.0			30.3
B. External financing as a percentage of total financing	—	—	—	12.8	3.4	3.1	0.4	13.4	7.5	3.7	3.4	6.4			13.7

Sources: This table summarizes detailed data on investment and financing in other transportation and communications tables in this report.

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*Not available.

[1] As a general view of gross investment in transportation and communications, the table underestimates the actual investment by omission of the following items: bus and truck bodies made in Mexico; spare parts manufactured in Mexico; importation of passenger cars used for public service (taxis and others); new investments of private railroad companies; investments in streetcar lines; airplanes not included in the import statistics; shipping not belonging to Petroleos Mexicanos' fleet. Furthermore, the items for maintenance are deficient. On the other hand, a part of the importation of trucks and planes does not correspond to productive uses (e.g., defense, etc.).

[2] Data for 1951 are estimated or preliminary.

[3] The following was assumed to be private investment: road transportation equipment (even though part of it is undoubtedly public investment), part of the maintenance of railroad tracks, part of the airports, all flight equipment, a part of the investment in radio communications and the investment in telephones.

[4] The agency which provides the financing is assumed to be the ultimate source of financing, regardless of the origin of the agency's funds.

[5] Includes only financing by private enterprises.

TABLE 92

TRANSPORTATION AND COMMUNICATIONS

Annual Increases in Volume, 1939-1950

(Percentages)

												Averages		
	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1940-1944	1945-1950	1940-1950
General Index	—	1.0	3.3	12.0	15.4	7.0	—1.0	9.7	0.1	—2.3	17.6	14.4	7.5	6.2	6.8
Railroads															
Freight: net ton-kilometers	—	2.0	4.9	15.0	15.5	1.4	—2.8	2.9	1.4	2.1	2.7	7.8	7.5	2.3	4.7
Passengers: passenger-kilometers	—	5.0	5.7	15.3	30.5	19.8	—5.5	—11.6	—3.6	—6.8	4.0	7.1	14.9	—3.0	4.8
Highways															
Freight: truck-kilometers	—	—	—	11.1	13.5	—2.4	(12.2)	10.9	(6.5)	6.8	23.0	(16.8)	4.2	12.6	8.7
Passengers: bus-kilometers	—	—	—	—	18.0	5.9	(13.6)	12.7	(8.1)	7.5	24.2	(16.9)	4.6	13.7	9.4
Passengers: automobile-kilometers	—	—	—	—5.0	2.1	—13.4	(—9.5)	—9.2	(27.5)	21.6	26.2	(18.5)	—3.4	11.3	4.4
Aviation															
Freight: tons of freight and express carried	—	—8.0	17.4	26.9	9.5	—7.3	43.9	26.5	42.7	45.2	46.6	19.9	6.8	37.1	22.4
Passengers: passenger-kilometers	—	19.0	177.3	—1.8	56.5	21.7	44.7	42.3	13.8	10.6	3.6	9.4	43.9	19.7	30.1
Maritime transport															

Freight: total freight handled by ports	—	—10.0	—3.3	—28.7	—	11.3	13.0	28.2	4.0	—4.8	11.1	34.6	—7.1	13.6	3.6
Passengers: total number of passengers using ports	—	—6.0	—16.0	—21.5	14.5	12.7	—5.0	—17.1	—12.7	—3.6	—17.0	—11.4	—4.4	—11.3	—8.2
Oil and gas pipe-lines															
Oil pipe-lines: daily capacity	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.3
Gas pipe-lines: daily capacity	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.0
Communications															
Number of messages transmitted through the national telegraph network	—	5.0	7.6	8.9	21.1	2.7	8.5	4.2	—13.9	3.4	9.1	(4.2)	8.9	2.2	5.2
Number of cable messages transmitted	—	—	100.0	—	—	50.0	33.3	—	—	—25.0	—	—	24.6	0.0	10.5
Domestic long distance conferences	—	—	—	10.0	22.7	18.5	12.5	13.9	12.2	10.9	3.9	30.2	9.8	13.7	11.9
International long distance conferences	—	—	—	—	17.0	13.7	12.8	11.3	—	99.4	—	150.2	5.9	35.7	21.3
Number of telephones	—	3.0	1.0	4.8	4.6	4.4	5.0	3.2	7.0	6.5	6.8	—	3.5	4.7	4.2

Source: Table 91.

TABLE 93

TRANSPORTATION AND COMMUNICATIONS—HIGHWAYS

Federal and grant-in-aid State highways, and farm-to-market roads

Investment, financing and other data, 1939-1951/52

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
I. *INVESTMENT* (million pesos)	*51.3*	*56.9*	*88.7*	*155.2*	*180.6*	*166.0*	*183.8*	*230.9*	*233.6*	*302.3*	*332.6*	*374.7*	*546.5*	
Construction	*45.2*	*48.5*	*75.5*	*138.5*	*156.0*	*142.3*	*150.1*	*194.5*	*195.8*	*264.0*	*283.3*	*323.7*	*489.1*	
Federal highways[1]	24.9	24.6	42.8	92.8	113.2	96.6	102.9	129.2	128.5	185.9	213.4	217.2	322.7	*
Grant-in-aid State highways[1]	20.3	23.9	32.7	45.7	42.8	45.7	44.2	54.0	67.3	74.8	64.6	79.4	120.9	*
Farm-to-market roads[2]	—	—	—	—	—	—	—	—	—	3.3	5.3	16.2	31.1	36.0
Other[3]	—	—	—	—	—	—	3.0	11.3	—	—	—	10.9	14.4	5.7
Maintenance	*6.1*	*8.4*	*13.2*	*16.7*	*24.6*	*23.7*	*33.7*	*36.4*	*37.8*	*38.3*	*49.3*	*51.0*	*57.4*	
Federal highways[1]	3.5	6.1	10.5	12.4	17.8	15.7	22.0	24.3	27.0	30.0	39.3	39.3	45.0	
Grant-in-aid State highways[1]	2.6	2.3	2.7	4.3	6.8	8.0	11.7	12.1	10.8	8.3	10.0	11.7	12.4	
Farm-to-market roads[2]	—	—	—	—	—	—	—	—	—	—	—	—	—	
Other[3]	—	—	—	—	—	—	—	—	—	—	—	—	—	
II. *FINANCING* (Million pesos)	*51.4*	*56.8*	*88.8*	*155.2*	*180.6*	*165.9*	*183.8*	*230.8*	*233.7*	*302.3*	*332.4*	*373.7*	*546.4*	
Construction	*45.3*	*48.4*	*75.6*	*138.4*	*155.9*	*142.2*	*150.1*	*194.5*	*195.8*	*264.0*	*283.1*	*322.6*	*489.0*	
Federal government budget appropriations	*3.2*	*4.0*	*2.1*	*3.3*	*38.6*	*123.5*	*31.3*	*25.1*	*68.2*	*235.2*	*215.9*	*287.7*	*299.5*	
Federal highways[1]	1.9	3.2	1.0	1.6	36.9	96.6	2.8	1.9	23.5	180.7[4]	173.1[4]	217.2	207.3[4]	
Grant-in-aid State highways[1]	1.3	0.8	1.1	1.7	1.7	26.9	25.5	11.9	44.7	52.5	40.7	53.6	79.2	
Farm-to-market roads[2]	—	—	—	—	—	—	—	—	—	2.0	2.1	6.0	13.0	12.0
Other[3]	—	—	—	—	—	—	3.0	11.3	—	—	—	10.9	—[4]	
Federal government — bond issues	*32.5*	*36.3*	*63.9*	*66.2*	*101.4*	—	*101.0*	*54.2*	*84.1*	—	—	—	—	
Federal highways[1]	23.0	21.4	41.8	42.7[5]	76.2	—	100.1	30.3[5]	80.3[5]	—	—	—	—	
Grant-in-aid State highways[1]	9.5	14.9	22.1	23.5	25.2	—	0.9	23.9	3.8	—	—	—	—	
State government funds	*9.6*	*8.1*	*9.6*	*20.4*	*15.9*	*18.7*	*17.8*	*18.2*	*18.8*	*23.6*	*26.3*	*28.8*	*50.7*	
Grant-in-aid State highways[1]	9.6	8.1	9.6	20.4	15.9	18.7	17.8	18.2	18.8	22.3	23.8	24.8	41.7	
Farm-to-market roads[2]	—	—	—	—	—	—	—	—	—	1.3	2.5	4.0	9.0	10.0

Private funds														
Farm-to-market roads[2]	—	—	—	—	—	—	—	—	—	—	*0.7*	*6.1*	*9.0*	*14.0*
Foreign loans	—	—	—	*48.5*	—	—	—	*97.0*	*24.7*	*5.2*	*40.2*	—	*129.8*	
Federal highways[6]	—	—	—	48.5[7]	—	—	—	97.0[7]	24.7[7]	5.2[7]	40.2[8]	—	129.8[8]	
Maintenance	*6.1*	*8.4*	*13.2*	*16.8*	*24.7*	*23.7*	*33.7*	*36.3*	*37.9*	*38.3*	*49.3*	*51.1*	*57.4*	
Federal government budget appropriations	6.1	8.4	13.2	16.8	12.3	23.7	33.7	36.3	37.9	38.3	49.3	51.1	57.4	
Proceed of bonds issues	—	—	—	—	12.4	—	—	—	—	—	—	—	—	—
III. *OTHER DATA*														
Federal and grant-in-aid State highways														
Annual increase in all-weather highways (Kms.)[1]	*768*	*1090*	*1265*	*1725*	*1552*	*1230*	*947*	*876*	*1490*	*1896*	*852*	*1120*	*1963*[9]	
Net increase in paving	751	1026	639	662	828	773	480	451	802	1675	1630	1155	1570	
Net increase in hard surfacing	17	64	626	1063	724	457	467	425	688	221	—778	—35	393	
Annual net increase in terracing (Kms.)[1]	—123	—269	606	1	168	—82	63	267	—169	199	30	—119	300	
Farm-to-market roads[2]	—	—	—	—	—	—	—	—	—	*152*	*329*	*537*	*660*	
Increase in paving (Kms.)	—	—	—	—	—	—	—	—	—	—	—	48	56	
Increase in hard-surfacing (Kms.)	—	—	—	—	—	—	—	—	—	152	329	489	604	
Total new all-weather highways[10]	*768*	*1090*	*1265*	*1725*	*1552*	*1230*	*947*	*876*	*1490*	*2048*	*1181*	*1657*	*2623*	

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Source: Shown in footnotes.

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*Not available.

[1] Dirección Nacional de Caminos, Ministry of Communications and Public Works.

[2] National Committee for Farm-to-Market Roads and Departamento de Planeación y Fomento de Carreteras Vecinales.

[3] In 1945 and 1946, Puertos Libres Mexicanos, Trans-Isthmic highway; in 1950-52, Constructora del Sur, Amacuzac-Iguala highway.

[4] Disbursements from external loans excluded.

[5] Bonds issued as security for foreign loans excluded.

[6] Disbursements; data from Nacional Financiera.

[7] Eximbank.

[8] Bank of America.

[9] Preliminary Data.

[10] In 1938 there were 3,004 Kms. of paved highways, 3,424 Kms. of all-weather hard surfaced highways and 2,035 Kms. of terracing, making a total of 8,463 Kms. In 1950, there were 13,876 Kms. paved, 7,363 of hard-surfaced and 2,607 in terracing, in addition to 970 Kms. of hard surfaced farm-to-market roads and 48 paved, making an aggregate of 24,864 Kms. 24543

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TABLE 94

TRANSPORTATION AND COMMUNICATION-ROAD TRANSPORTATION
Gross investment, financing and other data, 1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
I. *GROSS INVESTMENT* (million pesos)	*41.9*	*48.1*	*99.6*	*55.5*	*24.5*	*51.5*	*114.0*	*350.1*	*381.7*	*249.8*	*319.1*	*403.4*
Cost of vehicles[1]	*33.4*	*33.9*	*73.8*	*41.0*	*13.1*	*30.3*	*73.7*	*258.8*	*289.2*	*143.5*	*193.8*	*230.6*
Imports of trucks[2]	25.5	25.7	56.4	30.2	9.9	22.8	50.9	180.9	204.8	102.4	141.1	160.2
Imports of buses[2]	0.2	0.4	0.4	1.3	0.2	0.5	5.8	18.2	17.7	8.0	8.0	17.2
Sum	25.7	26.1	56.8	31.5	10.1	23.3	56.7	199.1	222.5	110.4	149.1	177.4
30% for freight, import duties and distribution expenses[3]	7.7	7.8	17.0	9.5	3.0	7.0	17.0	59.7	66.7	33.1	44.7	53.2
Maintenance	*8.5*	*14.2*	*25.8*	*14.5*	*11.4*	*21.2*	*40.3*	*91.3*	*92.5*	*106.3*	*125.3*	*172.8*
Imports of spare parts, and replacements[4]	4.7	7.9	14.3	8.1	6.3	11.8	22.4	51.0	51.4	59.1	69.6	96.0
30% for freight, import duties and distribution expenses[3]	1.4	2.4	4.3	2.4	1.9	3.5	6.7	15.3	15.4	17.7	20.9	28.8
Labor cost of repairs[5]	2.4	3.9	7.2	4.0	3.2	5.9	11.2	25.0	25.7	29.5	34.8	48.0
II. *FINANCING*												
It is assumed that the financing is totally private, although a part represents Government purchases.												
III. *OTHER DATA*												
Motor vehicles registered[6] (000)	*142.5*	*149.3*	*172.0*	*181.8*	*181.0*	*184.7*	*188.9*	*209.4*	*239.4*	*272.3*	*288.4*	**310.0*
Automobiles	89.4	93.6	106.3	113.4	112.0	111.9	113.3	120.9	134.1	150.3	160.6	
Trucks	39.5	41.9	50.6	53.5	54.8	57.3	59.8	71.7	86.2	99.8	106.3	
Passenger buses	10.0	10.1	11.3	11.1	11.0	12.3	12.4	12.9	14.8	16.9	16.2	
Motorcycles	3.6	3.7	3.8	3.8	3.2	3.2	3.4	3.9	4.3	5.3	5.3	
(In the Federal District):												
Automobiles	33.4	35.5	41.3	45.3	45.6	46.2	45.3	46.6	48.5	51.7	52.8	54.6
Trucks	7.9	8.6	10.0	11.5	9.9	10.2	9.8	10.5	11.6	12.5	12.6	12.9
Passenger buses	2.0	2.2	2.2	2.6	2.5	2.6	2.6	2.9	3.2	4.2	4.2	4.3
Motorcycles	1.6	1.7	1.9	2.0	1.6	1.7	1.8	1.9	2.0	2.3	2.5	2.1
	44.9	48.0	55.4	61.4	59.6	60.7	59.5	61.9	65.3	70.7	72.1	73.9

Source: Shown in footnotes.

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[1] Excluding taxis.

[2] Anuario Estadístico de Comercio Exterior and Banco Nacional de Comercio Exterior.

[3] Assumed in order to arrive at cost to the final buyer.

[4] 60% of total imports of spare parts, etc., assuming that there is greater depreciation in trucks and passenger buses than in private cars. Domestic productions of replacements (tires, batteries, etc.) is omitted.

[5] Assuming this item equal to 50% of the value of spare parts, etc.

[6] Dirección General de Estadística.

*Estimate.

TABLE 95

Transportation and Communications—Highways

Traffic on Five Highways, 1941-1949[1]

	1941	1942		1943		1944		1946		1948		1949	
	Monthly average (millions)	Monthly average (millions)	Index 1941=100	Monthly average (millions)	Index 1941=100	Monthly average (millions)	Index 1941=100	Monthly average (millions)	Index 1941=100	Monthly average (millions)	Index 1941=100	Monthly average (millions)	Index 1941=100
I. *NUMBER OF MOTOR VEHICLE-KILOMETERS ON FIVE HIGHWAYS*[2]	**52.7**	**52.5**	**100**	**56.3**	**107**	**52.0**	**99**	**63.2**	**120**	**70.4**	**134**	**88.0**	**167**
Trucks	*13.3*	*14.7*	*111*	*16.7*	*126*	*16.3*	*123*	*20.3*	*153*	*23.2*	*174*	*28.5*	*214*
Busses	*6.5*	*6.5*	*100*	*7.7*	*118*	*8.1*	*125*	*10.4*	*160*	*12.1*	*186*	*15.0*	*231*
Automobiles	*32.9*	*31.3*	*95*	*31.9*	*97*	*27.6*	*84*	*32.5*	*99*	*35.1*	*107*	*44.5*	*135*
Mexico-Laredo highway[3]													
Trucks	4.2	4.8	114	6.2	148	5.8	138	7.0	167	8.2	195	10.2	243
Busses	1.9	2.1	111	2.7	142	2.5	131	3.3	174	4.1	216	4.5	237
Automobiles	13.4	11.0	82	11.3	84	9.7	72	11.6	87	13.6	101	15.4	115
Mexico-Guadalajara highway													
Trucks	4.1	4.9	120	5.6	137	5.5	134	7.3	178	6.3	154	7.0	171
Busses	1.9	1.9	100	2.2	116	2.3	121	2.9	153	3.2	168	3.5	184
Automobiles	6.5	8.5	131	8.9	137	6.8	105	8.9	137	8.6	132	9.6	148
Mexico-Acapulco highway[4]													
Trucks	2.8	2.7	96	2.5	89	2.3	82	1.9	68	2.3	82	4.0	143
Busses	1.1	0.9	82	0.8	73	0.9	82	1.2	109	1.3	118	2.0	182
Automobiles	7.6	6.3	83	5.9	78	5.4	71	4.8	63	5.4	71	10.2	134
Mexico-Puebla highway													
Trucks	1.8	1.8	100	1.9	106	2.1	117	3.0	167	4.7	261	5.5	306
Busses	1.3	1.3	100	1.5	115	1.9	146	2.3	177	2.6	200	4.2	323
Automobiles	4.8	4.9	102	5.1	106	4.9	102	6.0	125	6.0	125	7.5	156

Puebla-Tehuacan highway													
Trucks	0.4	0.5	125	0.5	125	0.6	150	1.1	275	1.7	425	1.8	450
Busses	0.3	0.3	100	0.5	167	0.5	167	0.7	233	0.9	300	0.8	267
Automobiles	0.6	0.6	100	0.7	117	0.8	133	1.2	200	1.5	250	1.8	300
II. *PERCENTAGE ANNUAL INCREASE IN AGGREGATE TRAFFIC ON FIVE HIGHWAYS (%)*[5]			—		*7*		*—7*		*21*[6]		*12*[6]		*25*
Trucks			11		14		—2		24		14		23
Busses			—		18		6		28		16		24
Automobiles			—5		2		—13		18		8		26

Source: Nacional Financiera and Ministry of Communications and Public Works, Department of Federal Transit (Departamento de Tránsito Federal).

[1] On the basis of records kept by the Ministry of Communications and Public Works of the number of each kind of motor vehicles (trucks, busses and automobiles) which travel over certain Federal highways, the Departamento de Estudios Financieros of the Nacional Financiera developed data illustrative of highway traffic, by multiplying the annual monthly average of the number of motor vehicles counted on each highway section in which the record was taken, by the length of the section, in order to obtain a monthly average of motor vehicle-kilometers. Complete or approximately complete data were available only for the five highways shown above, and in general it can be said that the figures are exaggerated insofar as not all vehicles covered the total distance of the section under observation; but on the other hand transportation capacity per unit is likely to have increased in recent years. No sufficiently useful data were available for 1945 and 1947. The indices for each highway are unweighted index numbers.

[2] The general indices are weighted averages of traffic for the whole of the five highways indicated, that is to say, they are indices of aggregate traffic on the five highways. In the 1946 and 1949 data estimates were made of data omitted in the records. (See notes 3 and 4.)

[3] The figures for 1946 were interpolated.

[4] The figures for 1949 were estimated on the assumption that traffic on the Mexico-Acapulco highway increased by the same percentage over 1948 as the average increase of traffic in the other four highways shown above.

[5] The average annual rate of growth of aggregate traffic on the five highways from 1941 to 1949 was 7.3%; that of truck traffic 10.5%; bus traffic, 11.5%; and automobile traffic, 4.5%. It should be remembered that these average figures are affected by the wartime scarcity of equipment.

[6] Increase over two years.

TABLE 96

TRANSPORTATION AND COMMUNICATIONS

Export and import freight traffic by highway and railroad through three border towns, 1941, 1947, 1948 and 1950[1]

(Thousands of tons)

	1941	1947	1948	1950	Percentage increase 1950/1941
TOTAL	*1,064*	*1,892*	*1,902*	*2,235*	*110*
Highway	79	470	451	762	865
Railroad	985	1,422	1,451	1,473	50
% by highway	7	25	24	34	
Nuevo Laredo	*574*	*1,072*	*1,081*	*1,341*	*133*
Highway	11	150	140	300	2,627
Railroad	563	922	941	1,041	85
% by highway	2	14	13	22	
Ciudad Juárez	*384*	*563*	*508*	*597*	*55*
Highway	48	264	222	320	567
Railroad	336	299	286	277	—18
% by highway	12	47	44	54	
Piedras Negras	*106*	*257*	*313*	*297*	*180*
Highway	20	56	89	142	610
Railroad	86	201	224	155	80
% by highway	19	22	28	48	

Source: Export-Import Bank, Washington.

[1] The figures on highway traffic were obtained by subtracting from total tonnage of exports and imports through the stated border cities (figures from the Dirección General de Estadística), the tonnage moved by the National Railways of Mexico according to the latter's figures. Approximately 39% of Mexico's foreign trade tonnage is moved through the three cities named above.

TABLE 97

TRANSPORTATION AND COMMUNICATIONS—RAILROADS

Gross investment and financing, 1939-1951

(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
I. *GROSS INVESTMENT*[1]	*98.5*	*101.8*	*106.2*	*135.5*	*192.3*	*231.1*	*287.3*	*318.0*	*445.8*	*379.4*	*393.2*	*654.4*	*596.9*
Track	*54.6*	*54.0*	*55.7*	*70.4*	*91.3*	*141.4*	*157.4*	*198.0*	*219.7*	*223.7*	*232.0*	*335.7*	*376.9*
Construction and rehabilitation[1]	*22.6*	*18.0*	*20.6*	*31.3*	*32.4*	*53.0*	*51.4*	*73.8*	*96.7*	*92.4*	*91.9*	*195.3*	*224.4*
Federal Government	16.2	11.6	14.1	20.9	32.0	24.1	27.4	46.7	57.0	48.6	49.2	82.6	74.4
National Railways of Mexico	6.4	6.4	6.5	10.4	0.4	28.9	24.0	27.1	39.7	43.8	42.7	112.7	150.0
Maintenance	*32.0*	*36.0*	*35.1*	*39.1*	*58.9*	*88.4*	*106.0*	*124.2*	*123.0*	*131.3*	*140.1*	*140.4*	*152.5*
Federal Government	*	—	0.2	0.6	0.5	2.2	1.8	2.1	2.0	2.3	3.4	4.0	4.5
National Railways of Mexico	22.1	23.0	22.4	24.9	40.5	57.0	66.3	78.2	90.8	87.3	92.9	91.4	100.0
Other[2]	9.9	13.0	12.5	13.6	17.9	29.2	37.9	43.9	30.2	41.7	43.8	45.0	48.0
Rolling stock	*43.9*	*47.8*	*50.5*	*65.1*	*101.0*	*89.7*	*129.9*	*120.0*	*226.1*	*155.7*	*161.2*	*318.7*	*220.0*
Additions[1]													
National Railways of Mexico	6.6	6.7	6.7	10.7	27.8	4.9	26.3	4.5	83.8	17.1	17.2	153.1	50.0
Maintenance[3]													
National Railways of Mexico	37.3	41.1	43.8	54.4	73.2	84.8	103.6	115.5	142.3	138.6	144.0	165.6	170.0
II. *FINANCING*[1]	*98.5*	*101.8*	*106.2*	*135.5*	*192.3*	*231.1*	*287.3*	*318.0*	*445.8*	*379.4*	*393.2*	*654.4*	*596.9*
Internal	*98.5*	*101.8*	*106.2*	*135.5*	*177.7*	*216.1*	*284.9*	*286.5*	*385.2*	*345.3*	*391.7*	*545.7*	*494.2*
Federal Government[4]	16.2	11.6	14.3	21.5	33.8	45.0	29.2	49.2	111.7	220.0	260.2	174.1	134.6
Resources of the National Railways of Mexico[5]	81.6	79.9	88.6	97.3	133.1	154.7	173.7	180.4	157.3	144.7	220.5	256.1	310.0
Short term financing (N.R. of M.)[6]	—9.2	—2.7	—9.2	3.1	—7.1	—12.8	44.1	13.0	86.0	—61.1	—132.8	70.5	1.6
Resources of other railroads[7]	9.9	13.0	12.5	13.6	17.9	29.2	37.9	43.9	30.2	41.7	43.8	45.0	48.0
External	—	—	—	—	*14.6*	*15.0*	*2.4*	*31.5*	*60.6*	*34.1*	*1.5*	*108.7*	*102.7*
Eximbank[8]	—	—	—	—	—	—	—	31.5	60.6	34.1	1.5	99.7	98.4
Bank of America[9]	—	—	—	—	—	—	—	—	—	—	—	9.0	4.3
U. S. Government[10]	—	—	—	—	14.6	15.0	2.4	—	—	—	—	—	—

Sources: Ministry of Communications and Public Works, Dirección General de Ferrocarriles en Construcción and Departamento de Ferrocarriles en Explotación; National Railways of Mexico; report of the U.S. Railroad Mission in Mexico, 1942-1946; Nacional Financiera.

*Not available.

[1] Not including new investments made by private railroad companies, the amount of which is not available, but is probably not very large compared to the total. Figures for 1951 are preliminary and estimated.

[2] Includes private companies.

[3] Not including maintenance expenditures of private companies, the amount of which is unavailable.

[4] Federal Government construction and maintenance of track, and subsidies to National Railways of Mexico.

[5] Net income before deducting expenditures for maintenance, plus proceeds of sale of scrap and of land.

[6] See table 99.

[7] Includes only the financing of track maintenance expenditures.

[8] National Railways of Mexico.

[9] Ferrocarril del Sureste.

[10] U.S. Railroad Mission in Mexico.

TABLE 98

TRANSPORTATION AND COMMUNICATIONS—RAILROADS

Ministry of Communications and Public Works
(Secretaría de Comunicaciones y Obras Públicas)
Gross investment, financing and other data, 1939-1952

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951[1]	1952 and later years
I. *GROSS INVESTMENT IN TRACK* (Millions of pesos)	*16.2*	*11.6*	*14.3*	*21.5*	*32.5*	*26.3*	*29.2*	*48.8*	*57.0*	*50.9*	*52.6*	*86.6*	*78.9*	
Constructed by the Federal Government	*16.2*	*11.6*	*14.1*	*20.9*	*32.0*	*24.1*	*27.4*	*46.7*	*50.9*	*44.5*	*48.6*	*77.7*	*72.8*[2]	
Caltzontzin—Apatzingan	1.0	1.6	1.8	—	—	—	—	—	—	—	—	—	—	
Southeastern railroad (Sureste)	12.6	9.0	11.0	16.6	27.6	18.7	18.9	22.6	34.5	26.8	34.8	39.4	37.5	
Sonora—Lower California	2.6	0.8	1.0	3.3	2.8	3.1	4.6	20.8	13.5	14.0	12.1	16.0	18.9	
Chihuahua—Pacific	—	0.2	0.3	0.9	1.6	2.3	3.7	3.3	2.6	2.6	0.9	—	—	241.6[3]
Mexico—Tuxpam	—	—	—	0.1	—	—	—	—	0.1	0.7	0.7	21.3	2.7	150.0[4]
Mexico—Acapulco	—	—	—	—	—	—	0.2	—	0.2	—	—	—	—	
Durango—Mazatlán	—	—	—	—	—	—	—	—	—	0.4	0.1	1.0	11.8	181.6[2]
Rehabilitation	—	—	—	—	—	—	—	—	*4.1*	*4.1*	*0.6*	*4.9*	*1.6*	
Kansas City, Mexico and Orient R.R.														
Maintenance	*	—	*0.2*	*0.6*	*0.5*	*2.2*	*1.8*	*2.1*	*2.0*	*2.3*	*3.4*	*4.0*[6]	*4.5*[2]	
Railroads operated by Federal Government[5]														

II. *FINANCING* (Millions of pesos)	*30.0*	*30.0*	*30.0*	*30.0*	*33.3*	*33.1*	*30.0*	*39.0*	*51.2*	*50.0*	*50.0*	*85.3*	*73.0*	
Federal Government:														
Fiscal resources[7]	30.0	30.0	18.0	9.0	14.8	25.6	30.0	39.0	51.2	50.0	50.0	76.3	68.7[6]	
Internal loans[7]	—	—	12.0	21.0	18.5	7.5	—	—	—	—	—	—	—	
External loans[8]	—	—	—	—	—	—	—	—	—	—	—	9.0	4.3	2.1[9]
III. *OTHER DATA*														
Annual laying of track (kilometers)	*146*	*159*	*38*	*42*	*41*	*18*	*31*	*134*	*296*	*20*	*38*	*14*	*49*	
Caltzontzin—Apatzingan	21	7	38	—	—	—	—	—	—	—	—	—	—	
Southeastern railroad (Sureste)	93	116	—	42	41	18	31	91	56	20	38	—	—	
Sonora—Lower California	32	36	—	—	—	—	—	43	240	—	—	—	—	
Mexico—Tuxpam	—	—	—	—	—	—	—	—	—	—	—	14	49	

Source: Ministry of Communications and Public Works, Dirección General de Construcción de Ferrocarriles.

*Not available.

[1] Preliminary data.

[2] The total for 1951 includes 1.4 million pesos for general services.

[3] Estimate made in 1949, in Report of the Ministry of Communications and Public Works to the Committee for the Study of Economic Problems of the Northwest.

[4] Estimate made by the Dirección General de Construcción de Ferrocarriles.

[5] Sonora—Lower California and Southeastern Railroads. Source: Ministry of Communications and Public Works, Departamento de Ferrocarriles en Explotación.

[6] Estimated.

[7] Budget appropriations. From 1939 to 1942 these budgetary data show a higher figure than actual expenditures.

[8] Bank of America loan through Nacional Financiera and the Banco de Comercio for the Southeastern Railroad.

[9] 1952 only.

TABLE 99

Transportation and Communications—Railroads

Ferrocarriles Nacionales de México
(National Railways of Mexico)
Gross investment and financing, 1939-1952
(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
I. *GROSS INVESTMENT*[1]	*72.4*	*77.2*	*79.4*	*100.4*	*141.9*	*175.6*	*220.2*	*225.2*	*356.6*	*286.8*	*296.8*	*522.8*	*470.0*	*540.0*
Additions and improvements	*13.0*[2]	*13.1*[2]	*13.2*[2]	*21.1*	*28.2*	*33.8*	*50.3*	*31.5*	*123.5*	*60.9*	*59.9*	*265.8*	*200.0*[4]	*250.0*[4]
Roadbed (track, etc.)	6.4	6.4	6.5	10.4	0.4	28.9	24.0	27.1	39.7[3]	43.8	42.7[3]	112.7	*	*
Rolling stock	6.6	6.7	6.7	10.7	27.8	4.9	26.3	4.5	83.8	17.1	17.2	153.1	*	*
Maintenance	*59.4*	*64.1*	*66.2*	*79.3*	*113.7*	*141.8*	*169.9*	*193.7*	*233.1*	*225.9*	*236.9*	*257.0*	*270.0*	*290.0*
Track and structures	22.1	23.0	22.4	24.9	40.5	57.0	66.3	78.2	90.8	87.3	92.9	91.4	100.0[5]	110.0[5]
Rolling stock	37.3	41.1	43.8	54.4	73.2	84.8	103.6	115.5	142.3	138.6	144.0	165.6	170.0[5]	180.0[5]
II. *FINANCING*[1]	*72.4*	*77.2*	*79.4*	*100.4*	*141.9*	*175.6*	*220.2*	*225.2*	*356.6*	*286.8*	*296.8*	*522.8*	*470.0*	*540.0*
Internal														
Federal Government[6]	—	—	—	—	1.3	18.7	†	0.3	52.7	169.1	207.6	96.5	60.0[5]	60.0[5]
Resources of National Railways														
Sale of scrap	—	—	—	—	5.6	1.1	0.8	0.8	1.3	13.0	6.9	1.4	30.0[7]	30.0[7]
Sale of land	—	—	—	—	—	—	—	—	—	—	—	—	10.0[7]	10.0[7]
Net income before deduction of maintenance cost[8]	81.6	79.9	88.6	97.3	127.5	153.6	172.9	179.6	156.0	131.7	213.6	254.7	270.0[5]	290.0[5]
Short term financing[9]	—9.2	—2.7	—9.2	3.1	—7.1	—12.8	44.1	13.0	86.0	—61.1	—132.8	70.5	1.6	20.2
External														
U. S. Government Railroad Misión[10]	—	—	—	—	14.6	15.0	2.4	—	—	—	—	—	—	—
Eximbank[11]	—	—	—	—	—	—	—	31.5	60.6	34.1	1.5	99.7	[12]98.4	[12]129.8

Source: National Railways of Mexico, Nacional Financiera and Report of the U.S. Railroad Mission, 1942-1946.

*Not available.

†Less than 50,000 pesos.

[1] National Railways of Mexico, Accounting and Statistics Departments.

[2] The total for the years 1939-41 was divided by 3.

[3] Excludes 13.2 million pesos in 1947 and 63.2 million in 1949 for the purchase of the Interoceánico R.R.; it has been assumed that the major part was cost of track.

[4] Estimated by the Combined Mexican Working Party from programs presented to the Export-Import Bank.

[5] Estimated by the Combined Mexican Working Party.

[6] Direct subsidies and subsidies equivalent to the 10% tax on gross earnings. In 1948, a 98.5 million pesos subsidy for the payment of floating debt, and in 1949, a 61.2 million subsidy, are included. For 1951 the budgeted subsidy is shown (Presupuesto General de Egresos de la Federación, 1951).

[7] Estimates based on information received from the management of the National Railways.

[8] Gross operating income, less operating expenses, plus maintenance costs.

[9] Loans from Nacional Financiera and domestic and foreign suppliers (obtained as residual).

[10] Institute of Inter-American Transportation, The United States Railroad Mission in Mexico, 1942-1946. Division by years based on the data contained in the report cited, pp. 92-94.

[11] Drawings on Eximbank credits, converted into pesos at the prevailing rates of exchange. These disbursements do not correspond to the dates of the investments made with the loans because of interim financing; the short-term credit item has been adjusted for the interim financing.

[12] In 1951, 86.5 million pesos have been included as the estimated disbursement from the recent $56.0 million Eximbank loan; in 1952, disbursements are assumed to be 129.8 million pesos.

TABLE 100

Transportation and Communications—Railroads

Rolling stock and length of track, 1939-1949

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	Increase 1940-1949
I. *ROLLING STOCK*												
Locomotives												
Number of locomotives	1,359	1,345	1,305	1,314	1,357	1,321	1,373	1,467	1,467	1,455	1,441	
Tractive effort (millions of kilograms)	19.2	19.1	18.4	18.8	19.4	19.8	20.9	23.7	23.8	24.6	24.7	
Tractive effort per unit (thousands of kilograms)	14.1	14.2	14.1	14.3	14.6	15.0	15.2	16.1	16.3	16.9	17.2	
Cars												
Passenger	1,506	1,479	1,438	1,471	1,405	1,379	1,445	1,521	1,537	1,395	1,402	
Freight	21,055	20,756	20,276	21,525	21,921	20,921	21,040	23,256	22,890	22,240	21,749	
II. *LENGTH OF TRACK (kilometers)*[1]	*23,473*	*22,979*	*23,145*	*23,135*	*22,914*	*22,989*	*22,954*	*22,955*	*22,918*	*23,315*	*23,259*	
Mexican National Railways[2]		16,245	16,178	15,912	15,661	15,724	15,717	15,702	15,629	15,670	15,692	
Southern Pacific Railroad		2,403	2,403	2,393	2,394	2,397	2,360	2,394	2,369	2,369	2,269	
Mexican Railroad		961	828	828	834	827	830	834	834	834	834	
Southeastern Railroad	*	—	414	414	414	502	502	573	589	589	589	
United Railroads of Yucatán		899	899	910	910	910	910	910	910	910	910	
Sonora-Baja California Railroad		—	—	255	255	255	255	255	255	549	549	
Kansas City, Mexico and Orient Railroad		551	551	551	570	571	571	571	571	571	571	
Others		1,920	1,872	1,872	1,876	1,803	1,809	1,716	1,761	1,823	1,845	
Increase or decrease												
Total		*—494*	*166*	*—10*	*—221*	*75*	*—35*	*1*	*—37*	*397*	*—56*	*280*
Mexican National Railways[2]		*	—67	—266	—251	63	—7	—15	—73	41	22	—553
Southeastern Railroad		—	414	—	—	88	—	71	16	—	—	589
Sonora-Baja California Railroad		—	—	255	—	—	—	—	—	294	—	549
Others		*	—181	1	30	—76	—28	—55	20	62	—78	—305

Source: Ministry of Communications and Public Works, Departamento de Ferrocarriles en Explotación.

*Not available.

[1] Federal-grant railroads.

[2] Includes the Interoceanic Railroad.

TABLE 101

TRANSPORTATION AND COMMUNICATIONS—RAILROADS

Ferrocarriles Nacionales de México
(National Railways of Mexico)
Increase in rolling stock, traffic, indices of efficiency and other data, 1939-1950.

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
I. *INCREASE IN ROLLING STOCK*												
Locomotives	*	*	*6*	*27*	*34*	*15*	*34*	*75*	*9*	*31*	*6*	*47*
Steam			6	27	34	—	32	54	8	18	—	—
Diesel			—	—	—	15	2	21	1	13	6	47
Cars	*	*	—	*2096*	*500*	*51*	*219*	*1471*	*155*	*51*	*102*	*273*
Passenger			—	25	—	20	62	88	49	25	25	73
Freight			—	2071	500	31	157	1383	106	26	77	200
II. *TRAFFIC*												
Freight												
Revenue-producing freight (millions of metric tons)	9.8	9.7	9.9	10.9	11.7	11.9	12.5	12.6	14.7	14.3	14.7	15.4
Net ton-kilometers of revenue-producing freight (billions)	4.5	4.6	4.9	5.6	6.3	6.4	6.4	6.5	7.0	7.0	7.1	7.5
Passenger traffic												
Number of revenue-producing passengers (millions)	17.4	17.2	17.6	19.6	22.8	24.8	22.8	22.2	25.3	22.8	23.5	25.3
Passenger-kilometers (billions)	1.2	1.2	1.3	1.4	2.0	2.5	2.4	2.3	2.2	1.9	2.0	2.2

III. *INDICES OF EFFICIENCY*												
Net ton-kilometers per serviceable car-day......	1123	1117	1083	1068	1032	998	1000	998	1116	1050	1027	1093
Net tons per train-kilometer of freight..........	350	359	369	395	423	444	440	427	422	427	437	459
Gross ton-kilometers per train-hour (thousands)	19.0	18.8	19.1	18.3	17.7	16.4	16.2	16.0	17.1	17.4	17.5	17.6
Average speed of freight trains (kilometers per hour)	24.1	23.4	23.2	21.5	20.0	18.2	18.1	18.3	19.7	19.9	19.6	19.0
IV. *PERSONNEL AND WAGES*												
Number of workers and employees (thousands)[1]	43.5	44.5	44.8	46.2	48.1	51.1	53.1	56.9	63.8	57.5	58.0	54.4
Wages, salaries and benefits (millions of pesos)[1]	89.5	97.2	100.3	120.4	138.6	168.9	211.6	272.6	348.9	357.6	349.2	374.7
V. *CONSTRUCTION*												
Between the years 1941 and 1950, 1814 kilometers of track were relaid with 110 to 112.3 lbs. rail in the principal lines. Since 1947, many of the most important lines have been widened and rehabilitated; workshops, stations, terminals and hospitals have been built, and the work of reconstruction and introduction of new equipment has been intensified.												

Source: National Railways of Mexico, Departamento de Estadística.

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*Not available.

[1] For 1948 to 1950, the data are subject to revision because track work teams formerly included in the totals have been omitted.

TABLE 102

TRANSPORTATION AND COMMUNICATION—RAILROADS

Railroad traffic, 1939-1951

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
I. *FREIGHT*													
Tonnage hauled (millions of metric tons)	*15.4*	*15.0*	*15.7*	*16.9*	*21.3*	*20.2*	*20.7*	*21.0*	*21.1*	*21.2*	*21.6*	*23.0*	*24.9*[3]
National Railways of Mexico[1]	9.8	9.7	9.9	10.9	11.7	11.9	12.5	12.6	14.7	14.3	14.7	15.4	15.6[4]
Other railroads[2]	5.6	5.3	5.8	6.0	9.6	8.3	8.2	8.4	6.4	6.9	6.9	7.6	9.3
Number of net ton-kilometers (billions)	*5.7*	*5.8*	*6.1*	*7.0*	*8.1*	*8.2*	*8.0*	*8.2*	*8.3*	*8.5*	*8.7*	*9.4*	*9.6*[3]
National Railways of Mexico[1]	4.5	4.6	4.9	5.6	6.3	6.4	6.4	6.5	7.0	7.0	7.1	7.5	7.4[4]
Other railroads[2]	1.2	1.2	1.2	1.4	1.8	1.8	1.6	1.7	1.3	1.5	1.6	1.9	2.2
II. *PASSENGER TRAFFIC*													
Passengers carried (millions)	*29.8*	*27.9*	*28.0*	*31.9*	*36.1*	*38.0*	*35.0*	*33.1*	*32.3*	*29.9*	*30.9*	*32.5*	*31.1*[3]
National Railways of Mexico[1]	17.4	17.2	17.6	19.6	22.8	24.8	22.8	22.2	25.3	22.8	23.5	25.3	24.6[4]
Other railroads[2]	12.4	10.7	10.4	12.3	13.3	13.2	12.2	10.9	7.0	7.1	7.4	7.2	6.5
Number of passenger-kilometers (billions)	*1.8*	*1.9*	*2.0*	*2.3*	*3.0*	*3.6*	*3.4*	*3.0*	*2.9*	*2.7*	*2.8*	*3.0*	*3.0*[3]
National Railways of Mexico[1]	1.2	1.2	1.3	1.4	2.0	2.5	2.4	2.3	2.2	1.9	2.0	2.2	2.4[4]
Other railroads[2]	0.6	0.7	0.7	0.9	1.0	1.1	1.0	0.7	0.7	0.8	0.8	0.8	0.6

Average annual increase (%)			
1940 to 1944	1945 to 1950	1940 to 1950	1951

III. *INDICES* (1939=100)																	
Total traffic																	
Tonnage hauled	100	97	102	110	138	131	134	136	137	138	140	149	162				
Annual increase (%)		—3	5	8	25	—5	2	1	1	1	1	6	9	*6.0*	*2.0*	*3.8*	*9*
Net ton-kilometers	100	102	107	123	142	144	140	144	146	149	153	165	168				
Annual increase (%)		2	5	15	15	1	—3	3	1	2	3	8	2	*7.6*	*2.3*	*4.7*	*2*
Passengers carried	100	93	93	107	121	128	117	111	108	100	104	109	104				
Annual increase (%)		—7	—	15	13	6	—9	—5	—3	—8	4	5	—5	*5.4*	*—2.7*	*1.0*	*—5*
Passenger-kilometers	100	105	111	128	167	200	189	167	161	150	156	167	167				
Annual increase (%)		5	6	15	30	20	—6	—12	—4	—7	4	7	—	*15.2*	*—3.0*	*4.8*	*—*
National Railways of Mexico																	
Tonnage hauled	100	99	101	111	119	121	128	129	150	146	150	157	159				
Annual increase (%)		—1	2	10	7	2	6	1	16	—3	3	5	1	*4.0*	*4.7*	*4.4*	*1*
Net ton-kilometers	100	102	109	124	140	142	142	144	156	156	158	167	164				
Annual increase (%)		2	7	14	13	1	—	1	8	—	1	6	—2	*7.4*	*2.7*	*4.8*	*—2*
Passengers carried	100	99	101	113	131	143	131	128	145	131	135	145	141				
Annual increase (%)		—1	2	12	16	9	—8	—2	13	—10	3	7	—3	*7.6*	*0.5*	*3.7*	*—3*
Passenger-kilometers	100	100	108	117	167	208	200	191	183	158	167	183	200				
Annual increase (%)		—	8	8	43	25	—4	—5	—4	—14	6	10	9	*16.8*	*—1.8*	*6.6*	*9*

Sources: Dirección General de Estadística, Ministry of Communications and Public Works and National Railways of Mexico.

[1] As from 1947 also includes traffic on the former Interoceánico Railroad.

[2] Obtained by subtraction.

[3] Annual rate estimated on basis of data for January to April.

[4] Annual rate estimated on basis of data for January to June.

TABLE 103

TRANSPORTATION AND COMMUNICATIONS

Railroad freight on lines along which competing highways have been built since 1946

	Length of lines (Kms)	Percentage increase in freight traffic		Date highway was completed	Percentage increase in freight traffic with respect to 1946[1]			
		1950/1941	1946/1941		1947	1948	1949	1950
Durango—Torreón	253	93	55	1949	3	9	*13*	25
Saltillo—Piedras Negras	424	40	25	1948	16	*11*	11	11
Aguascalientes—San Luis Potosí	211	32	25	1950	5	12	25	*5*
Irapuato—Torreón	784	24	21	1948	8	*16*	1	2
Frío Sombrerete	9	—57	—1	1948	10	*—38*	—46	—57
Tamuín Calles	127	12	1	1948	23	*55*	38	11
Sabinas—Rosita	15	17	24	1947	*15*	7	7	6
Muzquiz—Barroterán	39	28	22	1947	*6*	14	—3	4
Manzanillo—Guadalajara	345	16	—10	1950	25	11	39	*25*
Guadalajara—Ameca	89	3	19	1949	2	10	*—1*	—13
Escobedo—Acámbaro	85	—11	22	1947	*0*	—5	—32	—27
México—Escobedo	314	4	27	1948	2	*—5*	—18	—18
Alvarado—Veracruz	72	—42	25	1948	1	*—37*	—38	—54
Jiménez—Ciudad Juárez	600	8	4	1948	6	*—11*	—6	3
Jiménez—Sta. Bárbara	117	12	17	1947	*0*	—14	15	—4
All traffic: National Railways of Mexico[2]		36	27		7	4	7	8

Source: Export-Import Bank, Washington, D. C. Data based on figures from the National Railways of Mexico.

[1] The underlined figures indicate the change in freight traffic in the year the competing highway was completed, with respect to 1946.

[2] The total length of the main lines operated by the National Railways of Mexico in 1950 was 13,300 kilometers; the sum of the lengths of lines given in this table is 3,484 kilometers.

TABLE 104

TRANSPORTATION AND COMMUNICATIONS—CIVIL AVIATION

Investment in airports and equipment, financing and other data, 1939-51

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
						(Millions of pesos)							
I. *INVESTMENT*													
Airports and ground equipment[1]	*	*	*	*2.0*[2]	*6.3*[2]	*3.6*	*2.8*	*8.6*	*8.8*	*7.4*	*25.0*	*25.4*	*19.0*
Federal Government[3]	—	—	—	—	—	—	—	—	1.5	2.1	22.8	23.6	18.8
Private companies[4]	*	*	*	2.0	6.3	3.6	2.8	8.6	7.3[5]	5.3	2.2	1.8	0.2
Flight equipment	*	*2.6*	*3.8*	*1.4*	*2.0*	*5.3*	*8.4*	*11.0*	*9.9*	*7.1*	*14.1*	*16.1*	*
Airplane imports[6]	*	1.8	2.6	0.4	0.2	1.2	1.1	2.8	0.9	1.4	2.4	1.4	*
Maintenance and spare parts[6]	*	0.8	1.2	1.0	1.8	4.1	7.3	8.2	9.0	5.7	11.7	14.7	*
II. *FINANCING*													
Federal Government—budget appropriations[3]	—	—	—	—	—	—	—	—	1.5	2.1	8.0	15.7	11.5
Federal Government—loans from contractors[3]	—	—	—	—	—	—	—	—	—	—	14.8	7.9	7.3
Private companies[7]	*	*	*	3.4	8.3	8.9	11.2	19.6	17.2	12.4	16.3	17.9	*
III. *OTHER DATA*[8]													
Airplane imports (units)	*	24	21	29	13	35	62	142	51	44	297	89	
Registered commercial airplanes	108	120	146	251	272	287	364	393	408	388	432	487	
Gross increase	25	23	39	120	42	35	78	*	*	*	*	*	
Net increase	3	12	26	105	21	15	77	29	15	—20	44	55	
Traffic[9]													
Passenger—kilometers (millions)	34.5	41.0	113.8	111.7	174.9	212.8	308.2	438.6	498.9	551.8	571.7	625.4	
Express and freight (thousands of tons)	3.8	3.5	4.1	5.2	5.7	5.3	7.6	9.6	13.7	19.9	29.2	35.0	
Kilometers traveled (millions)	7.9	8.7	10.8	15.7	20.0	20.3	27.1	33.0	34.5	35.6	37.8	41.9	

Sources: Departamento de Obras Públicas and Departamento de Aeronautica Civil, Secretaría de Comunicaciones y Obras Públicas; private airlines companies; Dirección General de Estadística.

*Not available.

[1] Construction of airports, buildings, equipment installed, etc.

[2] In 1942 and 1943, military air bases not included in these figures, were also constructed.

[3] Before 1946, expenditures on airports were small. The main airports built by the Federal Government are those in Mexico City, Guadalajara, Tijuana, Pie de le Cuesta (Acapulco) and Mazatlán. Some States have also built airports (e.g., the Saltillo airport).

[4] Airports built by three private airline companies: Compañía Mexicana de Aviación, Líneas Aéreas Mexicanas and American Airlines. (Mainly those in Mérida, Ciudad del Carmen, Villahermosa, Veracruz, Tampico, San Luis, Torreón, Ciudad Victoria, Monterrey, Nuevo Laredo, Parral, Chihuahua, etc.). Those built by other companies have been omitted. Figures for 1939-1941 were not available.

[5] Includes investment in airplane landing assistance equipment.

[6] Source: Dirección General de Estadística. "Maintenance and spare parts" includes imports of spare parts plus 50% estimated for labor cost of repairs. Figures for airplane imports are apparently lower than actual imports.

[7] Based on notes 4 and 6. Includes, to a considerable extent, external financing for the purchase of airplanes and construction of airports.

[8] Departamento de Aeronautica Civil.

[9] Includes a small amount of noncommercial traffic. 1950 data are preliminary.

TABLE 105

TRANSPORTATION AND COMMUNICATIONS—CIVIL AVIATION

Air traffic, 1939-1950[1]

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Average annual increases (percent) 1940-1944	1945-1950	1940-1950
Kilometers travelled	*7.9*	*8.7*	*10.8*	*15.7*	*20.0*	*20.3*	*27.1*	*33.0*	*34.5*	*35.6*	*37.8*	*41.9*			
Index (1939=100)	100	110	137	199	253	257	343	418	437	451	478	530			
Annual increase (%)		10	25	45	27	2	33	22	5	3	6	11	21.8	13.3	17.2
Tons of freight and express carried (000 tons)	*3.8*	*3.5*	*4.1*	*5.2*	*5.7*	*5.3*	*7.6*	*9.6*	*13.7*	*19.9*	*29.2*	*35.0*			
Index (1939=100)	100	92	108	137	150	139	200	253	361	524	768	921			
Annual increase (%)		—8	17	27	9	—7	44	27	43	45	47	20	7.6	37.7	22.4
Number of passengers carried (000)	*85.5*	*86.8*	*124.0*	*183.7*	*261.3*	*298.2*	*413.2*	*706.5*	*773.7*	*815.1*	*942.7*	*1033.2*			
Index (1939=100)	100	102	145	215	306	349	483	826	905	953	1103	1208			
Annual increase (%)		2	42	48	42	14	38	71	10	5	16	10	29.6	25.0	27.1
Number of passenger-kilometers (millions)	*34.5*	*41.0*	*113.8*	*111.7*	*174.9*	*212.8*	*308.2*	*438.6*	*498.9*	*551.8*	*571.7*	*625.4*			
Index (1939=100)	100	119	330	324	507	617	893	1271	1446	1599	1657	1813			
Annual increase (%)		19	177	—2	56	22	45	42	14	11	4	9	54.4	20.8	30.1

Source: Dirección General de Estadística, and Departamento de Aeronáutica Civil, Ministry of Communications and Public Works.

[1] Refers to the total traffic over Mexican territory, on ordinary commercial services and on special services, carried by both domestic and foreign companies.

TABLE 106

TRANSPORTATION AND COMMUNICATIONS—MARITIME TRANSPORT

Maritime traffic: annual averages for 1925-1929, 1936-1939, 1939-1944 and 1945-1950[1]

	Annual averages			
	1925-1929	1936-1939[9]	1939-1944[9]	1945-1950
I. *FREIGHT TRAFFIC* (thousands of metric tons)				
1. *Loadings*	*10,337*	*4,865*	*3,297*	*4,408*
2. International[2]	9,356	3,883	2,070	2,879
3. Coastal[3]	981	982	1,227	1,529
4. *Unloadings*	*1,916*	*1,590*	*1,656*	*2,330*
5. International[2]	916	596	432	802
6. Coastal[3]	1,000	994	1,224	1,528
7. *Total freight handled by ports*[4]	*12,253*	*6,455*	*4,953*	*6,738*
8. International (items 2 + 5)	10,272	4,479	2,502	3,681
9. Coastal (items 3 + 6)	1,981	1,976	2,451	3,057
10. *Total freight carried* (items (3 + 8)[5]	*11,253*	*5,461*	*3,729*	*5,210*
II. *PASSENGER TRAFFIC*				
11. *Outgoing*	*59,009*	*46,984*	*37,091*	*25,794*
12. International[2]	14,436	11,275	3,483	1,282
13. Coastal[3]	44,573	35,709	33,608	24,512
14. *Incoming*	*58,834*	*49,968*	*39,478*	*26,161*
15. International[2]	15,368	14,265	5,754	1,698
16. Coastal[3]	43,466	35,703	33,724	24,463
17. *Total number of passengers using ports* (items 11 + 14)[4]	*117,843*	*96,952*	*76,569*	*51,955*
18. *Total number of passengers carried* (items 12 + 13 + 15)[5]	*74,377*	*61,249*	*42,845*	*27,492*
III. *INDICES (1939=100) AND PERCENTAGES*[6]				
Freight				
Total freight handled by ports (item 7)[7, 4]	*194*	*102*	*78*	*107*
Annual increase (%)		—48	—25	37
Ratio of international to total freight handled (%)[8]	84	69	51	55
Total freight carried (item 10)[5]	*217*	*105*	*72*	*100*
Annual increase (%)		—52	—31	39
Freight carried in coastal service (item 3)	*86*	*86*	*107*	*134*
Annual increase (%)		—	23	25
International freight loadings (item 2)	*272*	*113*	*60*	*84*
Annual increase (%)		—59	—47	40
International freight unloadings (item 5)	*152*	*99*	*72*	*133*
Annual increase (%)		—35	—27	85

TABLE 106 (Continued)

Transportation and Communications—Maritime Transport

Maritime traffic: annual averages for 1925-1929, 1936-1939, 1939-1944 and 1945-1950[1]

	Annual averages			
	1925-1929	1936-1939[9]	1939-1944[9]	1945-1950
Passengers				
Total number of passengers using ports (item 17)[4]	*125*	*102*	*81*	*55*
Annual increase (%)		—18	—21	—32
Passengers carried on coastal service (item 13)	*124*	*99*	*93*	*68*
Annual increase (%)		—20	—6	—27
Incoming international passengers (item 12)	*182*	*142*	*44*	*16*
Annual increase (%)		—22	—69	—64
Outgoing international passengers (item 15)	*106*	*98*	*40*	*12*
Annual increase (%)		—8	—59	—70

Source: Anuario Estadístico and Compendio Estadístico, various years, and Dirección General de Estadística.

[1] See also table 107.

[2] International traffic usually, though not always, moves on foreign ships.

[3] Coastal traffic usually, though not always, moves on domestic ships.

[4] The figures for these items indicate the use of port services, and should be distinguished from the item explained in note 5, since it includes loadings as well as unloadings of freight in coastal service.

[5] The figures for these items are indicative of maritime traffic and include coastal traffic in one direction only.

[6] The base-year for these indices is the 1939 figure, which appears in table 107.

[7] The indices refer to the items numbered in parts I and II of this table.

[8] Item 8 as a percentage of item 7.

[9] 1939 is included in both the 1936-1939 average and the 1939-1944 average in order to provide the immediate pre-war period with a more representative average value.

TABLE 108

Transportation and Communications—Maritime Transport

Gross tonnage of merchant shipping, 1939-1950

	Petroleum fleet		Other Shipping		Total
	Gross Tonnage (thousands)	Percent of total	Gross Tonnage (thousands)	Percent of total	Gross Tonnage (thousands)
1939	39.3	*	*	*	*
1940	45.4	78	12.5	22	57.9
1941	86.2	70	36.7	30	122.9
1942	100.1	81	23.5	19	123.6
1943	103.4	86	17.2	14	120.6
1944	103.4	85	18.2	15	121.6
1945	103.4	79	26.8	21	130.2
1946	103.4	72	39.8	28	143.2
1947	104.6	68	48.4	32	153.0
1948	126.2	76	40.6	24	166.8
1949	129.1	74	44.4	26	173.5
1950	162.3	*	*	*	*

Source: Total tonnage, Dirección General de Estadística; petroleum fleet, based on data supplied by Petróleos Mexicanos.

*Not available.

TABLE 107

Transportation and Communications—Maritime Transport

Maritime traffic: 1939-1950[1]

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950			
I. *FREIGHT TRAFFIC* (thousand of metric tons)															
1. *Loadings*	*4,590*	*4,198*	*3,772*	*2,415*	*2,372*	*2,434*	*2,893*	*3,729*	*4,296*	*4,207*	*4,630*	*6,695*			
2. International[2]	3,446	3,276	2,581	1,125	1,019	971	1,496	1,920	2,911	2,839	2,966	5,142			
3. Coastal[3]	1,144	922	1,191	1,290	1,353	1,463	1,397	1,809	1,385	1,368	1,664	1,553			
4. *Unloadings*	*1,736*	*1,485*	*1,749*	*1,481*	*1,549*	*1,937*	*2,015*	*2,622*	*2,260*	*2,075*	*2,345*	*2,663*			
5. International[2]	601	556	580	209	188	460	618	811	884	708	681	1,111			
6. Coastal[3]	1,135	929	1,169	1,272	1,361	1,477	1,397	1,811	1,376	1,367	1,664	1,552			
7. *Total freight handled by ports*[4]	*6,326*	*5,683*	*5,521*	*3,896*	*3,921*	*4,371*	*4,908*	*6,351*	*6,556*	*6,282*	*6,975*	*9,358*			
8. International (items (2 + 5)	4,047	3,832	3,161	1,334	1,207	1,431	2,114	2,731	3,795	3,547	3,647	6,253			
9. Coastal (items 3 + 6)	2,279	1,851	2,360	2,562	2,714	2,940	2,794	3,620	2,761	2,735	3,328	3,105			
10. *Total freight carried* (items 3 + 8)[5]	*5,191*	*4,754*	*4,352*	*2,624*	*2,560*	*2,894*	*3,511*	*4,540*	*5,180*	*4,915*	*5,311*	*7,806*			
II. *PASSENGER TRAFFIC*															
11. *Outgoing*	*43,972*	*43,400*	*36,011*	*27,775*	*33,550*	*37,836*	*35,727*	*29,974*	*25,746*	*25,222*	*20,234*	*17,858*			
12. International[2]	7,952	6,070	5,112	441	418	902	680	741	656	1,938	1,611	2,064			
13. Coastal[3]	36,020	37,330	30,899	27,334	33,132	36,934	35,047	29,233	25,090	23,284	18,623	15,794			
14. *Incoming*	*50,619*	*45,132*	*38,799*	*30,787*	*33,425*	*38,109*	*35,930*	*29,934*	*25,987*	*25,286*	*21,338*	*18,594*			
15. International[2]	14,439	8,094	7,596	3,011	431	954	921	836	974	2,005	2,715	2,840			
16. Coastal[3]	36,180	37,038	31,203	27,776	32,994	37,155	35,009	29,098	25,013	23,281	18,623	15,754			
17. *Total number of passengers using ports* (items 11 + 14)[4]	*94,591*	*88,532*	*74,810*	*58,562*	*66,975*	*75,945*	*71,657*	*59,908*	*51,733*	*50,508*	*41,572*	*36,452*			
18. *Total number of passengers carried* (items 12 + 13 + 15)[5]	*58,411*	*51,494*	*43,607*	*30,786*	*33,981*	*38,790*	*36,648*	*30,810*	*26,720*	*27,227*	*22,949*	*20,698*			
													Average annual increases (percent)		
III. *INDICES* (1939=100) *AND PERCENTAGES*													1940-1944	1945-1950	1940-1950
Freight															
Total freight handled by ports (item 7)[6, 4]	*100*	*90*	*87*	*62*	*62*	*69*	*78*	*100*	*104*	*99*	*110*	*148*			
Annual increase (%)		—10	—3	—29	—	11	13	28	4	—5	11	35	—6.2	14.3	3.6
Ratio of international to total freight handled (%)[7]	64	67	57	34	31	33	43	43	58	56	52	67			
Total freight carried (item 10)[5]	*100*	*92*	*84*	*51*	*49*	*56*	*68*	*87*	*100*	*95*	*102*	*150*			
Annual increase (%)		—8	—9	—39	—4	14	21	28	15	—5	7	47	—9.2	18.8	6.1
Freight carried in coastal service (item 3)	*100*	*81*	*104*	*113*	*118*	*128*	*122*	*158*	*121*	*120*	*145*	*136*			
Annual increase (%)		—19	28	9	4	8	—5	30	—23	—1	21	—6	6.0	2.7	4.2
International freight loadings (item 2)	*100*	*95*	*75*	*33*	*30*	*28*	*43*	*56*	*84*	*82*	*86*	*149*			
Annual increase (%)		—5	—21	—56	—9	—7	54	30	50	—2	5	73	—19.6	35.0	10.2
International freight unloadings (item 5)	*100*	*93*	*97*	*35*	*31*	*77*	*103*	*135*	*147*	*118*	*113*	*185*			
Annual increase (%)		—7	4	—64	—11	148	34	31	9	—20	—4	64	14.0	19.0	16.7
PASSENGERS															
Total number of passengers using ports (item 17)[4]	*100*	*94*	*79*	*62*	*71*	*80*	*76*	*63*	*55*	*53*	*44*	*39*			
Annual increase (%)		—6	—16	—22	15	13	—5	—17	—13	—4	—17	—11	—3.2	—11.2	—8.2
Passengers carried on coastal service (item 13)	*100*	*104*	*86*	*76*	*92*	*103*	*97*	*81*	*70*	*65*	*52*	*44*			
Annual increase (%)		4	—17	—12	21	12	—6	—16	—14	—7	—20	—15	1.6	—13.0	—6.4
Incoming international passengers (item 12)	*100*	*76*	*64*	*6*	*5*	*11*	*9*	*9*	*8*	*24*	*20*	*26*			
Annual increase (%)		—24	—16	—91	—17	120	—18	—	—11	200	—17	30	—5.6	30.7	14.2
Outgoing international passengers (item 15)	*100*	*56*	*53*	*21*	*3*	*7*	*6*	*6*	*7*	*14*	*19*	*20*			
Annual increase (%)		—44	—5	—60	—86	133	—14	—	17	100	36	5	—12.4	24.0	7.5

Source: Anuario Estadístico and Compendio Estadístico, various years, and Dirección General de Estadística.

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[1] See also table 106.

[2] International traffic usually, though not always, moves on foreign ships.

[3] Coastal traffic usually, though not always, moves on domestic ships.

[4] The figures for these items indicate the use of port services, and should be distinguished from the item explained in footnote 5, since it includes loadings as well as unloadings of freight in coastal service.

[5] The figures for these items are indicative of maritime traffic and include coastal traffic in one direction only.

[6] The indices refer to the items numbered in parts I and II of this table.

[7] Item 8 as a percentage of item 7.

TABLE 109

TRANSPORTATION AND COMMUNICATIONS

Means of transportation used by tourists from abroad, 1944-1950[1]

Means of transportation used	1944	1945	1946	1947	1948	1949	1950[2]
				(Thousands of tourists)			
Automobile	33.6	57.2	117.4	111.0	128.2	161.5	141.0
Bus	16.7	18.3	15.8	12.5	17.2	18.6	14.3
Railroad	21.0	19.2	20.1	14.3	12.5	15.5	11.9
Airplane	21.9	28.9	41.4	44.6	49.1	61.7	55.0
Ship	.2	.3	.3	.2	.3	.3	.2
Unclassified	20.3	20.2	43.5	42.4	30.4	31.1	16.5
Total	*113.7*	*144.1*	*238.5*	*225.1*	*237.7*	*288.7*	*238.9*
				(Percentages of total)			
Automobile	30	40	49	49	54	56	59
Bus	15	13	7	6	7	7	6
Railroad	18	13	9	6	5	5	5
Airplane	19	20	17	20	21	21	23
Ship	—	—	—	—	—	—	—
Unclassified	18	14	18	19	13	11	7

Source: Dirección General de Estadística and Bank of Mexico, Departamento de Estudios Económicos.

[1] Statistics gathered at point where tourists leave Mexican territory.

[2] Estimates.

TABLE 110

TRANSPORTATION AND COMMUNICATION—TELEGRAPHY AND RADIOTELEGRAPHY

Secretaría de Comunicaciones y Obras Públicas
(Ministry of Communications and Public Works)
Gross investment, financing and other data, 1939-1950/52

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951[2]	1952[2]
I. *GROSS INVESTMENT* (millions of pesos)	*0.7*	*0.8*	*0.6*	*1.5*	*1.8*	*1.9*	*1.5*	*1.8*	*2.5*	*10.3*	*9.0*	*2.4*	*18.8*	*5.5*
Telegraphy equipment and construction of lines[1]	0.1	0.2	0.1	0.5	1.0	0.7	0.5	0.6	1.0	2.8	1.6	1.3	7.6	5.0
Radio stations (including buildings)	0.1	0.2	0.2	0.3	0.2	0.4	0.3	0.3	0.5	6.3	6.2	0.3	11.2[3]	0.5[3]
Maintenance	0.5	0.4	0.3	0.7	0.6	0.8	0.7	0.9	1.0	1.2	1.2	0.8	[4]	[4]
II. *FINANCING* (millions of pesos)	*0.7*	*0.8*	*0.6*	*1.5*	*1.8*	*1.9*	*1.5*	*1.8*	*2.5*	*10.3*	*9.0*	*2.4*	*18.8*	*5.5*
Federal Government:														
Fiscal resources	0.7	0.8	0.6	1.5	1.8	1.9	1.5	1.8	2.5	1.8	1.8	2.4	18.8	5.5
Loans[5]	—	—	—	—	—	—	—	—	—	8.5	7.2	—	—	—
III. *OTHER DATA*														
Number of telegraph and telephone offices	1009	1045	1068	1079	1080	1042	1040	1047	1049	1052	1068	1144		
Annual increase in kilometer-lengths of telegraph lines	743	1103	555	1194	2506	1100	975	1485	1723	5653	2267	2249		
Number of radio stations in operation	35	36	37	37	40	40	40	42	44	43	47	48		
New buildings	—	—	—	1	—	1	—	—	1	—	4	1		
Traffic:														
Number of messages transmitted through the national telegraph network (millions)[6]	*9.7*	*10.2*	*11.0*	*11.9*	*14.4*	*14.8*	*16.1*	*16.8*	*14.4*	*14.9*	*16.3*	*		
Official	0.7	1.2	1.4	1.7	2.2	2.3	2.2	*	*	*	*	*		
Private	9.0	9.0	9.5	10.2	12.2	12.5	13.8	*	*	*	*	*		
Number of cable messages transmitted (millions)	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.3	*		

Source: Secretaría de Comunicaciones y Obras Públicas, Dirección General de Telecomunicaciones. Details may not add up to totals because of rounding.

*Not available.

[1] Up to 1950, includes mainly lines; in 1951 and 1952 telegraphy equipment is included.

[2] Projects.

[3] Includes furniture and vehicles.

[4] Included in the total of new investment.

[5] Telecommunication bonds.

[6] Dirección General de Estadística and Anuario Estadístico.

TABLE 111

TRANSPORTATION AND COMMUNICATIONS—TELEPHONES[1]

Investments and other data, 1939-1951

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	Average annual increase (%)		
														1942-1946	1947-1950	1942-1950
I. *INVESTMENT* (millions of pesos)[2]	*10.7*	*11.8*	*11.2*	*10.7*	*9.1*	*9.3*	*11.6*	*15.4*	*37.3*	*33.8*	*51.4*	*35.3*	*40.0*[3]			
Telephone equipment	8.7	10.2	6.8	6.0	5.1	5.0	5.8	7.5	20.2	17.1	31.2	19.3				
Lines	1.5	1.4	3.9	4.3	3.6	3.9	5.2	6.3	14.7	14.6	17.2	12.8				
Miscellaneous equipment	0.3	0.2	0.3	0.3	0.3	0.3	0.4	1.0	1.1	1.2	1.2	1.2				
Land and buildings	0.2	*	0.2	0.1	0.1	0.1	0.2	0.6	1.3	0.9	1.7	2.1				
II. *OTHER DATA*																
Number of telephones (000)[4]	*170.5*	*174.8*	*176.7*	*186.6*	*195.1*	*202.5*	*212.7*	*220.1*	*235.8*	*250.0*	*268.1*	*				
Index (1939=100)	100	103	104	109	114	119	125	129	138	147	157	*				
Annual increase (%)		3	1	5	5	4	5	3	7	7	7	—		3.7[5]	7.0[6]	4.7
Number of exchanges	†	†	*190*	*199*	*201*	*204*	*208*	*218*	*246*	*258*	*286*	*468*				
Index (1941=100)			100	105	106	107	109	115	129	136	151	246				
Annual increase (%)				5	1	1	2	6	12	5	11	63		3.0	22.8	11.8
Long distance lines (000) kms.																
Physical:	†	†	*5.7*	*5.8*	*5.8*	*5.9*	*5.9*	*6.0*	*8.2*	*8.3*	*8.7*	*10.2*				
Index (1941=100)			100	102	102	104	104	105	144	146	153	179				
Annual increase (%)				2	—	2	—	1	37	1	5	17		1.0	15.0	7.2
Circuits:	†	†	*42.0*	*45.9*	*45.5*	*50.9*	*55.6*	*64.8*	*80.1*	*105.1*	*125.3*	*203.8*				
Index (1941=100)			100	109	108	121	132	154	191	250	298	485				
Annual increase (%)				9	—1	12	9	17	24	31	19	63		9.2	34.3	20.3
Long distance conferences (millions)																
International:	†	†	*0.06*	*0.06*	*0.07*	*0.08*	*0.09*	*0.1*	*0.1*	*0.2*	*0.2*	*0.5*				
Index (1941=100)			100	100	117	133	150	167	167	333	333	833				
Annual increase (%)				—	17	14	13	11	—	99	—	150		11.0	62.3	33.8
Domestic:	†	†	*2.0*	*2.2*	*2.7*	*3.2*	*3.6*	*4.1*	*4.6*	*5.1*	*5.3*	*6.9*				
Index (1941=100)			100	110	135	160	180	205	230	255	265	345				
Annual increase (%)				10	23	19	13	14	12	11	4	30		15.8	14.3	15.1

Source: Ministry of Communications and Public Works, Dirección General de Telecomunicaciones.

[1] Excludes data on private telephone communication systems, operated by companies and agencies for their own use.

[2] Probably includes maintenance expenditures.

[3] Estimated.

[4] Dirección General de Estadística.

[5] 1940-1946 average.

[6] 1947-1949 average.

†Less than 50,000 pesos.

*Not available.

TABLE 112

EDUCATIONAL, PUBLIC HEALTH AND WELFARE SERVICES, 1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	Averages 1940-1945	Averages 1946-1950	Averages 1940-1950
Educational Services[1] (Millions of pesos)	*94.4*	*103.9*	*107.4*	*119.8*	*134.1*	*176.7*	*221.7*	*261.8*	*287.4*	*314.2*	*368.0*	*418.3*			
Expenditures of Ministry of Education[2]	67.0	75.3	76.7	85.7	94.4	129.7	170.0	199.1	216.0	236.7	279.0	312.3[3]			
Expenditures of States and Territories	27.4	28.6	30.7	34.1	39.7	47.0	51.7	62.7	71.4	77.5	89.0*	106.0*			
Volume of educational services[4] (Index 1939=100)	100.0	109.7	113.2	119.6	127.5	166.5	185.8	174.6	160.4	179.9	182.8	208.4			
Per capita volume of educational services (Index 1939=100)	100.0	108.4	108.7	112.4	116.9	149.1	162.2	148.8	132.8	144.7	142.9	157.6			
Annual rate of increase in volume of educational services (%)	—	9.7	3.2	5.7	6.6	30.6	11.6	—6.0	—8.1	12.2	1.6	14.0	10.9	2.3	6.9
Annual rate of increase in per capita volume of educational services (%)	—	8.4	0.3	3.4	4.0	27.5	8.8	—8.3	—10.8	9.0	—1.2	10.3	8.4	—0.6	4.2
													Averages 1939-1942	Averages 1943-1946	Averages 1947-1950
Expenditures for educational services in relation to total public expenditures[5] (%)	12.5	12.5	11.5	10.8	9.6	11.1	10.7	11.1	9.9	9.8	9.6	8.7	11.8	10.6	9.5
Public Health and Welfare Services[1] (Millions of pesos)	*36.0*	*39.7*	*43.1*	*52.2*	*63.4*	*84.0*	*107.0*	*111.9*	*178.0*	*208.5*	*251.6*	*290.8*			
Expenditures of Ministry of Health and Public Welfare[6]	31.5	35.1	37.8	46.0	56.0	61.2	69.9	54.1	94.9	102.0	114.2	122.9[3]			
Expenditures of Social Security Institute[7]	—	—	—	—	—	13.3	26.6	45.9	70.3	93.1	121.4	148.9			
Expenditures of States and Territories	4.5	4.6	5.3	6.2	7.4	9.5	10.5	11.9	12.8	13.4	16.0*	19.0*			
Volume of public health and welfare services[8] (Index 1939=100)	100.0	104.7	111.9	130.3	151.1	189.4	216.1	183.1	251.9	280.6	284.2	310.0			

Per capita volume of public health and welfare services (Index 1939=100)	100.0	103.4	107.5	122.5	138.6	169.6	188.7	156.0	208.6	225.8	222.2	234.4			
													Averages		
													1940-1945	1946-1950	1940-1950
Annual rate of increase in volume of public health and welfare services (%)	—	4.7	6.9	16.4	16.0	25.3	14.1	—15.3	37.6	11.4	1.3	9.1	13.7	7.5	10.8
Annual rate of increase in per capita volume of public health and welfare services (%)	—	3.4	4.0	14.0	13.1	22.4	11.3	—17.3	33.7	8.2	—1.6	5.5	11.2	4.4	8.1
													Averages		
													1939-1942	1943-1946	1947-1950
Expenditures for public health and welfare services in relation to total public expenditures[5] (%)	4.8	4.8	4.6	4.7	4.6	5.3	5.2	4.8	6.2	6.5	6.6	6.1	4.7	5.0	6.4

Sources: Expenditures of the Ministry of Education and of the Ministry of Health and Public Welfare: For 1939-44, Anuario Estadístico; for 1945-49 Compendio Estadístico 1950; for 1950, Presupuesto General de Egresos de la Federación 1950. Expenditures of the Social Security Institute: for 1944-49, Instituto Mexicano del Seguro Social 1949; for 1950, Instituto Mexicano del Seguro Social, Memoria de Labores de la H. Asamblea General 1949-50. Expenditures of States and Territories: for 1939-48, Ministry of Finance, Direccion de Estudios Hacendarios, Departamento de Estudios Economicos, special analysis of data of the Direccion General de Estadistica; for 1949-1950, estimated on the assumption of similar ratios among expenditures for education, public health and welfare and total expenditures of States and Territories (cf. Table 113) as in annual average for the period 1939-48.

*Estimated.

[1] Because of the lack of information it has not been possible to include relatively minor expenditures for educational, public health and welfare services of the Federal District Government and municipalities.

[2] Includes some minor investment expenditures.

[3] Budget estimates.

[4] The volume of educational services was estimated by deflating the expenditures of the Ministry of Education and of States and Territories with an index for the average salaries of Government employees in the educational field, computed by the Combined Mexican Working Party on the basis of information from the Ministry of Finance and Public Credit.

[5] Total public expenditures according to table 113.

[6] Includes in 1941-46 some investment expenditures for sanitation engineering; other investment expenditures are excluded.

[7] Excludes investment expenditures.

[8] The volume of public health and welfare services was estimated by deflating expenditures of the Ministry of Health and Public Welfare and of States and territories with an index for the average salaries for main groups of Government employees, computed by the Combined Mexican Working Party on the basis of information from the Ministry of Finance and Public Credit, and expenditures of the Social Security Institute with the Bank of Mexico wholesale price index of 210 commodities. The wholesale price index was chosen as deflator for the expenditures of the Social Security Institute, instead of the salaries index, since a substantial part of Social Security Institute expenditures represent compensation payments and purchase of material, and also because salaries paid by the Social Security Institute are considerably higher than average Government salaries.

TABLE 113

Public Finance

Net Expenditures of the Public Sector, 1939-1951

(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
TOTAL NET EXPENDITURES[1]	*753.0*	*832.9*	*933.8*	*1,111.8*	*1,393.2*	*1,597.7*	*2,066.7*	*2,352.1*	*2,893.5*	*3,222.3*	*3,816.7*	*4,781.3*	*5,834.0*
Federal Government[2]													
Total cash expenditures	554.5	598.5	671.7	811.6	1,030.6	1,171.8	1,433.9	1,594.8	2,012.7	2,309.9	2,638.6	3,140.0	3,800.0
—Subsidies to states and territories	—2.7	—2.0	—2.4	—2.4	—3.0	—3.4	—4.0	—4.6	—2.4	—2.1	—3.5	—4.0	—4.5
—Transfers to the Pensions Fund	—	—	—	—	—	—	—	—6.3	—18.2	—22.7	—36.2	—26.0	—26.0
—Transfers to the Social Security Institute	—	—	—	—	—	—	—16.6	—19.7	—7.5	—20.4		—20.0	—20.0
+Expenditures not registered in Public Accounts	—	—	2.3	12.4	13.0	6.1	14.3	37.7	5.4	8.9	111.9	102.5	408.4
Net expenditures	551.8	596.5	671.6	821.6	1,040.6	1,174.5	1,427.6	1,601.9	1,990.0	2,273.6	2,710.8	3,192.5	4,157.9
States and territories[3]													
Total cash expenditures	139.5	152.4	160.1	169.9	213.7	245.3	321.9	323.5	364.2	417.5	431.7	512.0	612.0
—Transfers to the Federal Government	—12.9	—13.8	—16.5	—19.1	—21.9	—24.8	—30.7	—35.7	—29.8	—33.4	—5.7	—6.0	—6.0
—Transfers to municipalities	—1.1	—2.8	—1.8	—2.5	—2.3	—2.6	—3.7	—4.3	—5.0	—6.2	—6.0	—6.0	—6.0
Net expenditures	125.5	135.8	141.8	148.3	189.5	217.9	287.5	283.5	329.4	377.9	420.0	500.0	600.0
Federal District[4]													
Total cash expenditures	57.8	68.1	89.6	95.1	99.7	110.1	131.9	167.8	174.3	247.4	270.0	300.0	350.0
—Transfers to the Federal Government	—9.8	—8.5	—7.0	—6.0	—8.2	—4.3	—4.1	—6.8	—20.6	—21.3	—20.1	—20.0	—20.0
Net expenditures	48.0	59.6	82.6	89.1	91.5	105.8	127.8	161.0	153.7	226.1	249.9	280.0	330.0

Municipalities[5]													
Total expenditures	39.3	42.0	44.1	49.3	63.8	75.3	98.2	82.0	93.5	108.3	125.1	145.0	180.0
—Transfers to the Federal Government	—3.2	—3.3	—3.7	—4.1	—4.3	—5.3	—6.1	—7.0	—8.1	—8.4	—	—	—
—Transfers to states........	—0.7	—0.9	—0.8	—1.9	—1.3	—0.1	—0.3	—1.8	—0.3	0.5	—10.0	—10.0	—10.0
Net expenditures	35.4	37.8	39.6	43.3	58.2	69.9	91.8	73.2	85.1	99.4	115.1	135.0	170.0
Federal Local Public Works Boards[6]													
Expenditures met out of own fiscal resources....	—	2.8	3.7	2.8	2.7	3.5	4.0	6.3	7.2	11.1	16.5	20.0	23.0
Social Security Institute[7]													
Cash expenditures	—	—	—	—	—	16.5	32.7	60.7	97.4	123.0	150.2	181.0	200.0
General Office for Civil and Retirement Pensions[8]													
Cash expenditures	1.5	3.1	3.5	3.6	3.2	3.5	4.3	11.0	18.0	28.4	18.0	27.4	37.2
Other Autonomous Public Agencies[9]	—9.2	—2.7	—9.0	3.1	7.5	6.1	91.0	154.5	212.7	82.8	136.2	445.4	315.9
(Total transfers between the above agencies)	(30.4)	(31.3)	(32.2)	(36.0)	(41.0)	(40.5)	(65.5)	(86.2)	(91.9)	(115.0)	(81.5)	(92.0)	(92.5)

Source: Combined Mexican Working Party, based on sources indicated in footnotes.

[1] Excluding debt amortization and non-cash expenditures. For a fuller explanation of this item see footnote 1 of table 120.

[2] 1939-1949, Ministry of Finance, Dirección de Estudios Hacendarios, Departamento de Estudios Económicos, special analysis of the Public Accounts, except "expenditures not registered in Public Accounts," which were compiled by the Combined Mexican Working Party (see table 114). Figures for 1950 and 1951 were estimated by the Combined Mexican Working Party.

[3] Net expenditures and transfers to municipalities obtained from source given in footnote 2, according to a special analysis of the data of the Dirección General de Estadística. Transfers to the Federal Government taken from the latter's revenue statistics, compiled by the same source. Total cash expenditures are the sum of transfers and net expenditures. Figures for 1950 and 1951 were estimated by the Combined Mexican Working Party.

[4] Total cash expenditures were obtained from the Department of the Federal District. Transfers to the Federal Government, from the latter's revenue statistics. Figures from 1949 to 1951 were estimated by the Combined Mexican Working Party.

[5] Total net expenditures of municipalities were obtained from the Dirección General de Estadística and the Bank of Mexico. Transfers to the Federal Government, from the latter's revenue statistics; transfers to the States, from the figures on their revenues compiled and analyzed by the Ministry of Finance, same source as for footnote 2. Figures for 1939 and 1948 to 1951 are estimated.

[6] Combined Mexican Working Party, table 21.

[7] Based on figures from the Social Security Institute; includes administrative expenditures, investment expenditures and benefits in cash and in kind.

[8] Based on figures from the General Office for Civil and Retirement Pensions; includes investments and pensions paid; excludes administrative expenditures.

[9] Combined Mexican Working Party, table 114.

TABLE 114

PUBLIC FINANCE

Financing of Federal Government Agencies, Autonomous Public Agencies and State Enterprises from Sources other than the Public Sector, 1939-1951[1]

(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
TOTAL	**—9.2**	**—2.7**	**—6.7**	**15.5**	**20.5**	**12.2**	**105.3**	**192.2**	**218.2**	**91.7**	**248.1**	**547.9**	**724.3**
I. *FEDERAL GOVERNMENT DEPARTMENTS*	—	—	*2.3*	*12.4*	*13.0*	*6.1*	*14.3*	*37.7*	*5.4*	*8.9*	*111.9*	*102.5*	*408.4*
1. *Ministry of Hydraulic Resources*	—	—	—	—	—	—	—	—	—	—	*21.4*	*59.7*	*223.0*
Private grants	—	—	—	—	—	—	—	—	—	—	21.3	47.7	182.8
Bank of America	—	—	—	—	—	—	—	—	—	—	0.1	12.0	7.3
Eximbank	—	—	—	—	—	—	—	—	—	—	—	—	32.9
2. *Ministry of Communications and Public Works*	—	—	—	—	—	—	—	—	—	—	*55.0*	*18.4*	*141.4*
Domestic credit	—	—	—	—	—	—	—	—	—	—	14.8	9.4	7.3
Bank of America	—	—	—	—	—	—	—	—	—	—	40.2	9.0	134.1
3. *Ministry of Health and Public Welfare*	—	—	*2.3*	*2.4*	*3.0*	*6.1*	*14.3*	*37.7*	*5.4*	*8.9*	*35.5*	*21.4*	*34.0*
Credit, National Mortgage and Public Works Bank	—	—	—	—	—	—	—	—	—	6.1	14.0	16.5	29.0
Other non-specified sources	—	—	2.3	2.4	3.0	6.1	14.3	37.7	5.4	2.8	4.5	4.9	5.0
Eximbank	—	—	—	—	—	—	—	—	—	—	17.0	—	—
4. *Ministry of Defense and Department of Military Industry*	—	—	—	*10.0*	*10.0*	—	—	—	—	—	—	*3.0*	*10.0*
Private foreign capital	—	—	—	10.0	10.0	—	—	—	—	—	—	—	—
Credit, National Mortgage and Public Works Bank	—	—	—	—	—	—	—	—	—	—	—	3.0	10.0
II. *AUTONOMOUS AGENCIES AND STATE ENTERPRISES*	*—9.2*	*—2.7*	*—9.0*	*3.1*	*7.5*	*6.1*	*91.0*	*154.5*	*212.7*	*82.8*	*136.2*	*445.4*	*315.9*
5. *National Railways of Mexico*	*—9.2*	*—2.7*	*—9.2*	*3.1*	*7.5*	*2.2*	*46.5*	*44.5*	*146.6*	*—27.0*	*—131.3*	*170.2*	*100.0*
Non-specified credit	—9.2	—2.7	—9.2	3.1	—7.1	—12.8	44.1	13.0	86.0	—61.1	—132.8	70.5	1.6
United States Government	—	—	—	—	14.6	15.0	2.4	—	—	—	—	—	—
Eximbank	—	—	—	—	—	—	—	31.5	60.6	34.1	1.5	99.7	98.4
6. *Petroleos Mexicanos*	—	—	—	—	—	—	*40.3*	*90.5*	—	*8.0*	*14.0*	*24.0*	*30.0*
Domestic loans	—	—	—	—	—	—	—	82.5	—	—	—	—	—
Eximbank	—	—	—	—	—	—	40.3	8.0	—	—	—	—	—
Private capital	—	—	—	—	—	—	—	—	—	8.0	14.0	24.0	30.0
7. *Federal Electricity Commission*	—	—	—	—	—	—	—	*5.7*	*20.2*	*19.2*	*42.5*	*66.8*	*103.2*
Nacional Financiera	—	—	—	—	—	—	—	—	—	13.7	—	—	—
International Bank for Reconstruction and Development	—	—	—	—	—	—	—	—	—	—	22.6	66.8	86.3
Other external credits	—	—	—	—	—	—	—	5.7	20.2	5.5	19.9	—	16.9
8. *New Chapala Electric Company*	—	—	—	—	—	—	—	*11.0*	*23.0*	*25.0*	*12.8*	*3.6*	—
Nacional Financiera	—	—	—	—	—	—	—	11.0	23.0	25.0	—	—	—
Eximbank	—	—	—	—	—	—	—	—	—	—	12.8	3.6	—
9. *Guano and Fertilizer Company*	—	—	—	—	—	*3.0*	*4.0*	*2.0*	*1.0*	—	*29.4*	*19.3*	*6.3*
Nacional Financiera—investment	—	—	—	—	—	3.0	4.0	2.0	1.0	—	—	—	—
Nacional Financiera—credit	—	—	—	—	—	—	—	—	—	—	0.8	4.3	—
Eximbank	—	—	—	—	—	—	—	—	—	—	28.6	15.0	6.3
10. *National Committee for Farm-to-Market Roads*	—	—	—	—	—	—	—	—	—	—	*0.7*	*6.0*	*8.8*
Private grants	—	—	—	—	—	—	—	—	—	—	0.7	6.0	8.8
11. *Southern Construction Company*	—	—	—	—	—	—	—	—	—	—	—	16.0	
Nacional Financiera	—	—	—	—	—	—	—	—	—	—	—	5.0	
Bank of America	—	—	—	—	—	—	—	—	—	—	—	11.0	
12. *National Mortgage and Public Works Bank*	—	—	—	—	—	—	—	—	—	—	—	—	—
Bond issues	—	—	—	—	—	—	—	—	*5.2*	*6.6*	*10.0*	*19.5*	*10.3*
13. *Committee for the Federal School Construction Program*	—	—	—	—	—	—	—	—	—	*3.0*	*3.0*	*4.0*	—
Private grants	—	—	—	—	—	—	—	—	—	2.0	2.0	2.0	—
Credit	—	—	—	—	—	—	—	—	—	1.0	1.0	2.0	—
14. *University City*	—	—	—	—	—	—	—	—	—	—	—	*5.1*	*15.0*
Nacional Financiera	—	—	—	—	—	—	—	—	—	—	—	—	15.0
Non-specified grants	—	—	—	—	—	—	—	—	—	—	—	5.1	—
15. *Mexico-U.S. Commission for the Eradication of the Foot-and-Mouth Disease*	—	—	—	—	—	—	—	—	*16.3*	*48.0*	*154.6*	*110.3*	*42.3*
U. S. Government	—	—	—	—	—	—	—	—	16.3	48.0	154.6	110.3	42.3
16. *National Warehouses*	—	—	*0.2*	—	—	*0.9*	*0.2*	*0.8*	*0.4*	—	*0.5*	*0.6*	—
Credit	—	—	0.2	—	—	0.9	0.2	0.8	0.4	—	0.5	0.6	—
Summary	**—9.2**	**—2.7**	**—6.7**	**15.5**	**20.5**	**12.2**	**105.3**	**192.2**	**218.1**	**91.7**	**248.1**	**547.9**	**724.3**
Domestic financing	*9.2*	*—2.7*	*—6.7*	*5.5*	*—4.1*	*—2.8*	*62.6*	*147.0*	*121.0*	*—3.9*	*—63.2*	*196.5*	*269.8*
Nacional Financiera	—	—	—	—	—	3.0	4.0	13.0	24.0	38.7	0.8	9.3	15.0
National Mortgage and Public Works Bank	—	—	—	—	—	—	—	—	—	6.1	14.0	19.5	39.0
Non-specified credit	—9.2	—2.7	—9.0	3.1	—7.1	—11.9	44.3	96.3	91.6	—53.5	—106.5	102.0	19.2
Private grants	—	—	—	—	—	—	—	—	—	2.0	24.0	60.8	191.6
Non-specified sources	—	—	2.3	2.4	3.0	6.1	14.3	37.7	5.4	2.8	4.5	4.9	5.0
External financing	—	—	—	*10.0*	*24.6*	*15.0*	*42.7*	*45.2*	*97.1*	*95.6*	*311.3*	*351.4*	*454.5*
Eximbank	—	—	—	—	—	—	40.3	39.5	60.6	34.1	59.9	118.3	137.6
IBRD	—	—	—	—	—	—	—	—	—	—	22.6	66.8	86.3
Bank of America	—	—	—	—	—	—	—	—	—	—	40.3	32.0	141.4
Non-specified credits	—	—	—	—	—	—	—	5.7	20.2	5.5	19.9	—	16.9
Private investments	—	—	—	10.0	10.0	—	—	—	—	8.0	14.0	24.0	30.0
Official grants	—	—	—	—	14.6	15.0	2.4	—	16.3	48.0	154.6	110.3	42.3

Source: Combined Mexican Working Party, table 21.

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[1] Some Federal Government agencies carry out expenditures not registered in the Federal budgetary accounts, financed by funds other than from the public sector; also a part of the expenditures of autonomous public agencies and state enterprises are financed in this manner. This table shows the amount of such financing, both domestic and external, excluding also investments financed out of operating earnings or surplus. 1950 data are preliminary, and 1951 data are largely estimates.

TABLE 115

PUBLIC FINANCE

Net Receipts of the Public Sector, 1939-1951

(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
TOTAL NET RECEIPTS[1]	*759.7*	*732.7*	*840.7*	*950.0*	*1,321.0*	*1,586.8*	*1,714.1*	*2,287.1*	*2,492.3*	*2,829.8*	*3,767.6*	*4,439.2*	*5,275.5*
Federal Government[2]													
Total cash receipts	574.6	523.7	600.7	680.2	1,012.1	1,177.6	1,270.2	1,740.1	1,844.9	2,031.6	2,833.0	3,340.0	4,000.0
—Transfers from public agencies	—25.9	—25.6	—27.2	—29.2	—34.4	—34.4	—40.9	—49.5	—58.5	—63.1	—25.8	—26.0	—26.0
Net cash receipts	548.7	498.1	573.5	651.0	977.7	1,143.2	1,229.3	1,690.6	1,786.4	1,968.5	2,807.2	3,314.0	3,974.0
States and Territories[3]													
Total cash receipts	109.7	124.2	135.6	152.6	177.9	202.4	226.9	267.8	323.4	380.4	409.9	480.0	580.0
—Transfers from the Federal Government	—2.7	—2.0	—2.4	—2.4	—3.0	—3.4	—4.0	—4.6	—2.4	—2.1	—3.5	—4.0	—4.5
—Transfers from municipalities	—0.7	—0.9	—0.8	—1.9	—1.3	—0.1	—0.3	—1.8	—0.3	—0.5	—10.0	—10.0	—10.0
Net cash receipts	106.3	121.3	132.4	148.3	173.6	198.9	222.6	261.4	320.7	377.8	396.4	466.0	565.5
Federal District[4]													
Net cash receipts	59.7	65.2	81.0	92.4	105.5	117.7	135.1	169.5	180.5	227.1	257.4	297.7	330.0
Municipalities[5]													
Total cash receipts	41.3	43.0	46.6	52.1	57.3	67.4	75.8	85.3	98.8	114.8	132.7	153.4	180.0
—Transfers from the states	—1.1	—2.8	—1.8	—2.5	—2.3	—2.6	—3.7	—4.3	—5.0	—6.2	—6.0	—6.0	—6.0
Net cash receipts	40.2	40.2	44.8	49.6	55.0	64.8	72.1	81.0	93.8	108.6	126.7	147.4	174.0
Federal Local Public Works Boards[6]													
Fiscal receipts	—	2.8	3.7	2.8	2.7	3.5	4.0	6.3	7.2	11.1	16.5	20.0	23.0
Social Security Institute[7]													
Total receipts	—	—	—	—	—	52.0	59.7	87.0	100.9	132.8	157.1	185.1	200.0
—Transfers from the Federal Government	—	—	—	—	—	—	—16.6	—19.7	—7.5	—20.4	—20.0	—20.0	—20.0
Net receipts	—	—	—	—	—	52.0	43.1	67.3	93.4	112.4	137.1	165.1	180.0

General Office for Civil and Retirement Pensions[8]													
Total receipts by the Fund	4.8	5.1	5.3	5.9	6.5	6.7	7.9	17.3	28.5	47.0	42.5	55.0	55.0
—Transfers from the Federal Government	—	—	—	—	—	—	—	—6.3	—18.2	—22.7	—16.2	—26.0	—26.0
Net receipts	4.8	5.1	5.3	5.9	6.5	6.7	7.9	11.0	10.3	24.3	26.3	29.0	29.0
(Total transfers between the above agencies)	(30.4)	(31.3)	(32.2)	(36.0)	(41.0)	(40.5)	(65.5)	(86.2)	(91.9)	(115.0)	(81.5)	(92.0)	(92.5)

Source: Combined Mexican Working Party, based on the sources indicated in the footnotes.

[1] Excluding the proceeds of loans and non-cash revenues. For a fuller explanation of this item see footnote 1 of table 120.

[2] Ministry of Finance and Public Credit, Dirección de Estudios Hacendarios, Departamento de Estudios Económicos, special analysis of the Public Accounts. The figures for 1950 and 1951 were estimated by the Combined Mexican Working Party.

[3] Total receipts and transfer payments from municipalities were obtained from a special analysis of state revenues made by the agency noted in footnote 2. Transfers from the Federal Government are derived from the analysis of the latter's expenditures, same source as in footnote 1. The data for 1949 are taken directly from the Dirección General de Estadística. Figures for 1950-1951 were estimated by the Combined Mexican Working Party.

[4] Data from the Department of the Federal District. The figure for 1951 is estimated.

[5] Total receipts were obtained from the Dirección General de Estadística and the Bank of Mexico, and transfers from the states from the latter's expenditures according to the source given in footnote 3. Figures for 1951 are estimated.

[6] Preliminary accounting data of Federal Government revenues in which this item is shown separately. The figure for 1951 is estimated.

[7] Total receipts were obtained from the Social Security Institute. The transfer from the Federal Government was obtained from the latter's expenditures, according to the source given in footnote 2. Figures for 1951 are estimated.

[8] Total receipts shown are based on data from the General Office for Civil and Retirement Pensions. The transfer from the Federal Government was obtained from the latter's expenditures, according to the source given in footnote 2. Figures for 1951 are estimated.

TABLE 116

PUBLIC FINANCE

Current and Investment Expenditures, 1939-1951

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
Total net expenditures (millions of pesos)[1]	*753.0*	*832.9*	*933.8*	*1,111.8*	*1,393.2*	*1,597.7*	*2,066.7*	*2,352.1*	*2,893.5*	*3,222.3*	*3,816.7*	*4,781.3*	*5,834.0*
Investment expenditures (millions of pesos)[2]	*142.0*	*178.8*	*248.7*	*355.3*	*457.8*	*518.4*	*677.5*	*901.1*	*1,134.1*	*1,329.6*	*1,555.2*	*1,985.2*	*2,296.8*
Total public investment	247.7	316.0	361.7	480.9	617.5	713.7	928.4	1,105.4	1,378.3	1,634.7	2,029.6	2,642.9	3,006.9
—Financing out of earnings or own resources	—105.7	—141.5	—118.5	—130.3	—163.7	—203.4	—263.1	—233.6	—291.9	—365.9	—527.3	—724.0	—786.1
+Investments of Social Security Institute	—	—	—	—	—	3.2	6.1	14.8	27.1	29.9	28.8	32.1	30.8
+Investments of Pension Fund	—	1.5	1.8	1.9	1.3	1.4	2.1	8.2	13.4	19.8	7.6	14.2	22.2
+Investments out of fiscal resources of Federal Local Public Works Boards	—	2.8	3.7	2.8	2.7	3.5	4.0	6.3	7.2	11.1	16.5	20.0	23.0
Current expenditures (millions of pesos)[3]	*611.0*	*654.1*	*685.1*	*756.5*	*935.4*	*1,079.3*	*1,389.2*	*1,451.0*	*1,759.4*	*1,892.7*	*2,261.5*	*2,796.1*	*3,537.2*
Percentages of total													
Investment expenditures	18.9	21.5	26.6	32.0	32.9	32.4	32.8	38.3	39.2	41.3	40.7	41.5	39.4
Current expenditures	81.1	78.5	73.4	68.0	67.1	67.6	67.2	61.7	60.8	58.7	59.3	58.5	60.6
Per capita (pesos)													
Investment expenditures	7.32	9.10	12.31	17.20	21.63	23.92	30.47	39.56	48.39	55.10	62.65	77.31	87.45
Current expenditures	31.47	33.28	33.90	36.62	44.19	49.79	62.48	63.69	75.05	78.44	91.09	108.89	134.67

Indices (1939=100)													
Investment expenditures..	100.0	125.9	175.1	250.2	322.4	365.1	477.1	634.6	798.7	936.3	1,095.2	1,398.0	1,617.5
Current expenditures	100.0	107.1	112.1	123.8	153.1	176.7	227.4	237.5	288.0	309.8	370.1	457.6	578.9
Investment expenditures per capita	100.0	124.3	168.2	235.0	295.5	326.7	416.2	540.4	661.0	752.7	855.8	1,056.1	1,194.6
Current expenditures per capita	100.0	105.7	107.7	116.3	140.4	158.2	198.5	202.3	238.4	249.2	289.4	345.9	427.8
Indices calculated at 1939 prices (1939=100)[4]													
Investment expenditures..	100.0	122.8	160.2	207.5	221.3	204.5	240.1	277.5	329.6	360.1	384.6	449.2	416.0
Current expenditures	100.0	104.5	102.6	102.7	105.1	99.0	114.4	103.9	118.9	119.2	130.0	147.0	148.9
Investment expenditures per capita	100.0	121.3	153.9	194.9	202.8	183.0	209.5	236.3	272.8	289.5	300.5	339.4	307.3
Current expenditures per capita	100.0	103.1	98.5	96.4	96.4	88.6	99.9	88.5	98.4	95.9	101.6	111.2	110.0
Excess of total net receipts over current expenditures[5]													
In millions of pesos	148.7	78.6	155.6	193.5	385.6	507.5	324.9	836.1	732.9	937.1	1,506.1	1,643.1	1,738.3
As a percentage	24.3	12.0	22.7	25.6	41.2	47.0	23.3	57.6	41.7	49.5	66.6	58.8	49.1
Ratio to investment expenditures (%)[6]	104.7	44.0	62.6	54.5	84.2	97.9	47.9	92.8	64.6	70.5	96.8	82.8	75.7

Sources. See footnotes. 1950 figures are preliminary and 1951 data are estimated.

[1] Table 113.

[2] Obtained by deducting from total public investment (Cf. table 18) the part financed from earnings and internal resources of the agencies, except in the case of the Social Security Institute, the Civil and Retirement Pensions Fund and the Federal Local Public Works Boards (Cf. table 21). That is, the data shown here are investment expenditures of the public sector financed from net receipts of the public sector or by means of the public sector's deficit; these figures do not include reinvestments by certain public agencies, (Cf. footnote 1 of table 120).

[3] Obtained by deducting investment expenditures from total expenditures.

[4] Deflated with the 210-commodity wholesale price index of the Bank of Mexico.

[5] These figures show that part of the net receipts of the public sector was used to finance investment expenditures.

[6] These calculations show the proportion of investment expenditures covered by ordinary receipts.

TABLE 117

PUBLIC FINANCE

Expenditures and Receipts of the Public Sector in Relation to Gross National Product and to Population, 1939-1951

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
Total net expenditures (millions of pesos)[1]	753.0	832.9	933.8	1,111.8	1,393.2	1,597.7	2,066.7	2,352.1	2,893.5	3,222.3	3,816.7	4,781.3	5,834.0
Total net receipts (millions of pesos)[2]	759.7	732.7	840.7	950.0	1,321.0	1,586.8	1,714.1	2,287.1	2,492.3	2,829.8	3,767.6	4,439.2	5,275.5
Gross national product (millions of pesos)[3]	6,657.1	7,122.6	8,447.0	10,490.3	13,290.7	17,397.3	20,679.0	27,263.4	29,808.9	32,388.6	35,529.8	43,038.1	56,400.0
Percentages of gross national product													
Total net expenditures	11.3	11.7	11.1	10.6	10.5	9.2	10.0	8.6	9.7	9.9	10.7	11.1	10.3
Total net receipts	11.4	10.3	10.0	9.1	9.9	9.1	8.3	8.4	8.4	8.7	10.6	10.3	9.4
Per capita (pesos)													
Net expenditures	38.79	42.38	46.21	53.82	65.82	73.71	92.95	103.25	123.44	133.54	153.74	186.20	222.12
Net receipts	39.13	37.28	41.60	45.99	62.41	73.21	77.10	100.40	106.32	117.27	151.76	172.88	200.86
Indices (1939=100)													
Total net expenditures	100.0	110.6	124.0	147.7	185.0	212.2	274.5	312.4	384.3	427.9	506.9	635.0	774.8
Total net receipts	100.0	96.5	110.7	125.1	173.9	208.9	225.6	301.1	328.1	372.5	495.9	584.3	694.4
Gross national product	100.0	107.0	126.9	157.6	199.7	261.3	310.6	409.5	447.8	486.5	533.7	646.5	847.2
Net expenditures per capita	100.0	109.2	119.1	138.7	169.6	189.9	239.5	266.1	318.1	344.1	396.2	479.8	572.4
Net receipts per capita	100.0	95.3	106.3	117.5	159.4	187.1	197.0	256.5	271.6	299.6	387.7	441.7	513.2
Indices calculated at 1939 prices[4] (1939=100)													
Total net expenditures	100.0	107.9	113.5	122.5	127.0	118.9	138.2	136.6	158.6	164.6	178.0	204.1	199.3
Total net receipts	100.0	94.2	101.3	103.7	119.4	117.0	113.5	131.7	135.4	143.3	174.1	187.8	178.6
Net expenditures per capita	100.0	106.5	109.0	115.0	116.4	106.4	120.5	116.4	131.3	132.4	139.1	154.2	147.2
Net receipts per capita	100.0	93.0	97.3	97.4	109.4	104.8	99.1	112.2	112.1	115.2	136.1	141.9	132.0
Real net domestic product per capita	100.0	100.4	110.3	122.8	125.0	133.2	140.5	147.0	145.5	148.4	151.3	162.1	*

Sources: Indicated in footnotes. 1950 data are preliminary and 1951 figures are estimated.

*Not available.

[1] Table 113.

[2] Table 115.

[3] Table 1.

[4] Data deflated with the 210-commodity wholesale price index of the Bank of Mexico, except the real net domestic product per capita, which is taken from table 7.

TABLE 118

PUBLIC FINANCE

Net Receipts of the Federal Government, by Principal Sources, 1939-1951

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
(Millions of pesos)													
NET RECEIPTS OF THE FEDERAL GOVERNMENT[1]	*548.7*	*498.1*	*573.5*	*651.0*	*977.7*	*1,143.2*	*1,229.3*	*1,690.6*	*1,786.4*	*1,968.5*	*2,807.2*	*3,314.0*	*3,974.0*
Direct taxes	*156.6*	*131.6*	*128.8*	*194.2*	*375.0*	*466.5*	*460.4*	*557.5*	*705.2*	*680.3*	*1,176.2*	*1,555.2*	*1,911.0*
Income taxes[2]	41.4	56.9	55.2	77.8	218.2	301.8	295.6	371.4	479.3	451.2	586.0	794.8	1,020.0
Capital taxes[3]	8.5	2.0	2.7	2.2	1.8	2.1	2.2	2.8	13.2	18.7	19.3	32.3	40.0
Metals production taxes	31.0	26.2	26.9	39.2	43.2	57.1	52.0	70.5	108.8	112.3	112.2	188.2	212.0
Export taxes[4]	75.7	46.5	44.0	75.0	111.8	105.5	110.6	112.8	103.9	98.1	458.7	539.9	639.0
Indirect taxes	*307.4*	*253.9*	*321.2*	*319.1*	*366.7*	*471.2*	*530.3*	*738.1*	*760.6*	*871.7*	*988.9*	*1,278.4*	*1,505.0*
Import taxes	113.2	92.1	130.0	94.1	89.9	117.9	135.3	207.6	252.3	323.4	345.2	420.2	540.0
Natural resources taxes (except mining)[5]	11.0	13.0	13.7	9.5	10.4	12.7	14.8	18.2	29.1	50.5	38.6	61.7	75.0
Sales and consumption taxes[6]	49.5	47.3	55.6	66.3	122.9	141.3	164.4	284.2	295.0	281.1	384.2	482.5	530.0
Industrial excise taxes[7]	96.6	83.2	83.9	96.5	83.3	106.3	113.7	128.2	123.5	116.2	139.8	166.0	190.0
Transportation taxes[8]	28.7	1.5	15.4	30.6	35.6	48.8	58.0	72.7	22.8	35.1	72.0	26.8	50.0
Other[9]	8.4	16.8	22.6	22.1	24.6	44.2	44.1	27.2	37.9	65.4	9.1	121.2	120.0
Other receipts[10]	*84.7*	*112.6*	*123.5*	*137.7*	*236.0*	*205.5*	*238.6*	*395.0*	*320.6*	*416.5*	*642.1*	*480.4*	*558.0*
(Percentages of total)													
TOTAL	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Direct taxes	*28.5*	*26.4*	*22.5*	*29.8*	*38.4*	*40.8*	*37.4*	*33.0*	*39.5*	*34.5*	*41.9*	*46.9*	*48.1*
Income taxes	7.5	11.4	9.6	12.0	22.3	26.4	24.0	22.0	26.8	22.9	20.9	24.0	25.7
Capital taxes	1.5	0.4	0.5	0.3	0.2	0.2	0.2	0.2	0.7	0.9	0.7	0.9	1.0
Metals production taxes	5.6	5.3	4.7	6.0	4.4	5.0	4.2	4.2	6.1	5.7	4.0	5.7	5.3
Export taxes	13.9	9.3	7.7	11.5	11.5	9.2	9.0	6.6	5.9	5.0	16.3	16.3	16.1

Indirect taxes	*56.0*	*51.0*	*56.0*	*49.0*	*37.5*	*41.2*	*43.1*	*43.6*	*42.6*	*44.3*	*35.2*	*38.6*	*37.9*
Import taxes	20.6	18.5	22.7	14.4	9.2	10.3	11.0	12.3	14.1	16.4	12.3	12.7	13.6
Natural resources taxes (except mining)	2.0	2.6	2.4	1.5	1.1	1.1	1.2	1.1	1.6	2.6	1.4	1.9	1.9
Sales and consumption taxes	9.0	9.5	9.7	10.2	12.5	12.4	13.4	16.8	16.5	14.3	13.7	14.5	13.3
Industrial excise taxes	17.6	16.7	14.6	14.8	8.5	9.3	9.2	7.6	6.9	5.9	5.0	5.0	4.8
Transportation taxes	5.2	0.3	2.7	4.7	3.6	4.3	4.7	4.3	1.3	1.8	2.6	0.8	1.3
Other	1.6	3.4	3.9	3.4	2.6	3.8	3.6	1.5	2.2	3.3	0.2	3.7	3.0
Other receipts	*15.5*	*22.6*	*21.5*	*21.2*	*24.1*	*18.0*	*19.5*	*23.4*	*18.0*	*21.2*	*22.9*	*14.5*	*14.0*

Sources: 1939-1949, Ministry of Finance and Public Credit, Dirección de Estudios Hacendarios, Departamento de Estudios Económicos; 1950, data derived from preliminary accounting statistics, Contaduría de la Federación, Ministry of Finance and Public Credit; 1951. estimate of the Combined Mexican Working Party based on preliminary data of the Contaduría de la Federación, January-June 1951.

[1] Transfers from other public authorities have been deducted, see table 115. Non-cash receipts have been omitted.

[2] Taxes on income (schedules I to V) and excess profits tax.

[3] Inheritance and estate taxes, gift tax and tax on lottery and games.

[4] Including the 15% surtax (formerly 12%).

[5] Taxes on petroleum production, forestry, hunting and fishing, etc.

[6] Taxes on gross sales or business income (formerly stamp tax), gasoline consumption, beer consumption, assembly of automobiles, sale of alcoholic beverages.

[7] Taxes on production of alcohol and liquor, tobacco, electric power, cotton textiles, etc.

[8] Taxes on freight and passenger fares, on gross receipts of railroads, etc.

[9] Taxes on insurance premiums, on non-mercantile documents and contracts, on immigration, 10% stamp surtax, and other unclassified taxes, including fees (quasi taxes) that are not the price of direct government services.

[10] Receipts of post and telegraph offices, profits, interest, rent and royalties on Government enterprises and properties; proceeds of sales, repayments of capital, fines and surcharges, tax arrears, etc.

TABLE 119

PUBLIC FINANCE

Relation between Fiscal Receipts and Some Items in the National Product and Expenditure, 1939-1951

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
I. *Percentages of gross national product*													
Total net receipts of the public sector	*11.4*	*10.3*	*10.0*	*9.1*	*9.9*	*9.1*	*8.3*	*8.4*	*8.4*	*8.7*	*10.6*	*10.3*	*9.4*
Federal Government	8.2	7.0	6.8	6.2	7.3	6.6	5.9	6.2	6.0	6.1	7.9	7.7	7.0
States and territories	1.6	1.7	1.6	1.4	1.3	1.1	1.1	1.0	1.1	1.2	1.1	1.1	1.0
Federal District	0.9	0.9	1.0	0.9	0.8	0.7	0.7	0.6	0.6	0.7	0.7	0.7	0.6
Municipalities	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3
Other public authorities	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5
II. *Indices* (1939=100)													
Gross national product	100.0	107.0	126.9	157.6	199.7	261.3	310.6	409.5	447.8	486.5	533.7	646.5	847.2
Total net receipts of the public sector	100.0	96.5	110.7	125.1	173.9	208.9	225.6	301.1	328.1	372.5	495.9	584.3	694.4
Federal Government	100.0	90.7	104.5	118.6	178.2	208.3	224.0	308.1	325.6	358.7	511.6	603.9	724.3
Direct taxes	100.0	84.0	82.2	124.0	239.5	297.9	294.0	356.0	450.3	434.4	751.1	993.1	1,220.3
On income	100.0	137.4	133.3	187.9	527.0	729.0	714.0	897.1	1,157.7	1,089.8	1,415.4	1,919.7	2,463.8
On metals production	100.0	84.5	86.8	126.4	139.4	184.2	167.8	227.4	351.0	362.3	362.0	607.1	683.9
On exports	100.0	61.4	58.1	99.1	147.7	139.4	146.1	149.0	137.3	129.6	605.9	713.2	844.1
Indirect taxes	100.0	81.8	105.0	103.4	117.6	150.5	171.6	241.9	249.3	286.8	326.9	425.2	501.7
On imports	100.0	81.4	114.8	83.1	79.4	104.2	119.5	183.4	222.9	285.7	304.9	371.2	477.0
On natural resources (except mining)	100.0	118.2	124.5	86.4	94.5	115.4	134.5	165.4	264.5	459.0	350.9	560.9	681.8
On sales and consumption	100.0	95.6	112.3	133.9	248.3	285.4	332.1	574.1	596.0	567.9	776.2	974.7	1,070.7
Industrial excise taxes	100.0	86.1	86.8	99.9	86.2	110.0	117.7	132.7	127.8	120.2	144.7	171.8	196.7
States and territories	100.0	114.1	124.6	124.6	139.5	163.3	209.4	245.9	301.7	355.4	372.9	438.4	532.0
Federal District	100.0	109.2	135.7	154.8	176.7	197.2	226.3	283.9	302.3	380.4	431.1	498.7	552.8
Municipalities	100.0	100.0	111.4	123.4	136.8	161.2	179.4	201.5	233.3	270.1	315.2	366.7	432.8

III. *Ratio of Federal Government direct taxes to profits*[1]	10.2	7.3	5.5	6.3	9.0	8.0	6.0	5.1	6.0	5.5	8.9	9.9	*
IV. *Ratio of total indirect taxation to total private consumption expenditure* (%)[2]	9.7	8.6	7.8	6.8	6.3	5.7	5.4	5.2	5.6	6.1	6.5	6.5	*
V. *Ratio of total indirect taxation to total net receipts of the public sector* (%)[2]	68.0	66.8	67.4	63.2	53.2	53.1	54.9	54.5	57.2	57.9	49.1	50.7	49.2

Sources: Tables 1, 115 and 118.

*Not available.

[1] As only approximately 10% of direct taxes are taxes on salaries and wages, and 90% are taxes on profits a comparison has been made between the amount of direct taxes and the part of the national income constituted by profits.

[2] Total indirect taxation is here taken as total taxes and quasi-taxes collected by the Federal Government, state governments, the Federal District and the Municipalities, less direct taxes collected by Federal Government.

TABLE 120

PUBLIC FINANCE

Net Expenditures and Receipts of the Public Sector of the Economy and Cash Deficit or Surplus, 1939-1951[1]

(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
I. *NET EXPENDITURES*[2]	*753.0*	*832.9*	*933.8*	*1,111.8*	*1,393.2*	*1,597.7*	*2,066.7*	*2,352.1*	*2,893.5*	*3,222.3*	*3,816.7*	*4,781.3*	*5,834.0*
Federal Government[3]	551.8	596.5	671.6	821.6	1,040.6	1,174.5	1,427.6	1,601.9	1,990.0	2,273.6	2,710.8	3,192.5	4,157.9
States and territories	125.5	135.8	141.8	148.3	189.5	217.9	287.5	283.5	329.4	377.9	420.0	500.0	600.0
Federal District	48.0	59.6	82.6	89.1	91.5	105.8	127.8	161.0	153.7	226.1	249.9	280.0	330.0
Municipalities	35.4	37.8	39.6	43.3	58.2	69.9	91.8	73.2	85.1	99.4	115.1	135.0	170.0
Federal Local Public Works Boards[4]	—	2.8	3.7	2.8	2.7	3.5	4.0	6.3	7.2	11.1	16.5	20.0	23.0
Social Security Institute	—	—	—	—	—	16.5	32.7	60.7	97.4	123.0	150.2	181.0	200.0
General Office for Civil and Retirement Pensions	1.5	3.1	3.5	3.6	3.2	3.5	4.3	11.0	18.0	28.4	18.0	27.4	37.2
Expenditures of autonomous public agencies and state enterprises not elsewhere included[4]	—9.2	—2.7	—9.0	3.1	7.5	6.1	91.0	154.5	212.7	82.8	136.2	445.4	315.9
II. *NET RECEIPTS*[5]	*759.7*	*732.7*	*840.7*	*950.0*	*1,321.0*	*1,586.8*	*1,714.1*	*2,287.1*	*2,492.3*	*2,829.8*	*3,767.6*	*4,439.2*	*5,275.5*
Federal Government	548.7	498.1	573.5	651.0	977.7	1,143.2	1,229.3	1,690.6	1,786.4	1,968.5	2,807.2	3,314.0	3,974.0
States and territories	106.3	121.3	132.4	148.3	173.6	198.9	222.6	261.4	320.7	377.8	396.4	466.0	565.5
Federal District	59.7	65.2	81.0	92.4	105.5	117.7	135.1	169.5	180.5	227.1	257.4	297.7	330.0
Municipalities	40.2	40.2	44.8	49.6	55.0	64.8	72.1	81.0	93.8	108.6	126.7	147.4	174.0
Federal Local Public Works Boards	—	2.8	3.7	2.8	2.7	3.5	4.0	6.3	7.2	11.1	16.5	20.0	23.0
Social Security Institute	—	—	—	—	—	52.0	43.1	67.3	93.4	112.4	137.1	165.1	180.0
General Office for Civil and Retirement Pensions	4.8	5.1	5.3	5.9	6.5	6.7	7.9	11.0	10.3	24.3	26.3	29.0	29.0

III. *CASH DEFICIT OR SURPLUS*	*+6.7*	*—100.2*	*—93.1*	*—161.8*	*—72.2*	*—10.9*	*—352.6*	*—65.0*	*—401.2*	*—392.5*	*—49.1*	*—342.1*	*—558.5*
Federal Government	—3.1	—98.4	—98.1	—170.6	—62.9	—31.3	—198.3	+88.7	—203.6	—305.1	+96.4	+121.5	—183.9
States and territories	—19.2	—14.5	—9.4	—	—15.9	—19.0	—64.9	—22.1	—8.7	—0.1	—23.6	—34.0	—34.5
Federal District	+11.7	+5.6	—1.6	+3.3	+14.0	+11.9	+7.3	+8.5	+26.8	+1.0	+7.5	+17.7	—
Municipalities	+4.8	+2.4	+5.2	+6.3	—3.2	—5.1	—19.7	+7.8	+8.7	+9.2	+11.6	+12.4	+4.0
Federal Local Public Works Boards	—	—	—	—	—	—	—	—	—	—	—	—	—
Social Security Institute	—	—	—	—	—	+35.5	+10.4	+6.6	—4.0	—10.6	—13.1	—15.9	—20.0
General Office for Civil and Retirement Pensions	+3.3	+2.0	+1.8	+2.3	+3.3	+3.2	+3.6	—	—7.7	—4.1	+8.3	+1.6	—8.2
Autonomous public agencies and state enterprises not elsewhere included	+9.2	+2.7	+9.0	—3.1	—7.5	—6.1	—91.0	—154.5	—212.7	—82.8	—136.2	—445.4	—315.9

Source: Combined Mexican Working Party; tables 113 and 115 and sources indicated therein.

[1] This table shows cash expenditures made by the public sector of the economy and cash receipts from the private sector. *Public sector* includes government authorities and autonomous public agencies and state enterprises. *Net expenditures* are total cash disbursements for goods and services and transfers to the private sector, by the Federal Government, States and Territories, the Federal District, Municipalities, Federal Local Public Works Boards, the Social Security Institute and the General Office for Civil and Retirement Pensions, as well as that part of the expenditures of autonomous public agencies and state enterprises which is not financed out of earnings of the agencies or with funds from government authorities, but is financed from funds outside the public sector. Debt amortization payments, non-cash expenditures and transfers of funds between different authorities are excluded. Administrative expenditures of most autonomous public agencies are excluded, as well as operating expenses of state enterprises, on the assumption that they are met out of operating or current income of the agencies or that they are already included in the expenditures of government authorities. An exception is made in the case of the Social Security Institute, whose administrative and other expenses are considered as public expenditures. In the case of the General Office for Civil and Retirement Pensions its administrative expenses are assumed to be met out of current operating revenues. *Net receipts* means total cash receipts collected from the private sector by the same agencies included in expenditures, excluding the proceeds of loans or credits, grants and subsidies received, and operating revenues of the autonomous public agencies and state enterprises; also excluded are transfers received from other authorities. The term *cash deficit* represents the net use by the public sector of credit resources and of subsidies from the private sector as well as from abroad and also the net use of government cash holdings; the term *cash surplus* represents the net payment of debt by the public sector to the private sector or abroad, as well as the net increase in cash holdings. All data for 1950 are preliminary; those for 1951 are estimates.

[2] See table 113.

[3] Includes contributions to autonomous public agencies and state enterprises, except to the Social Security Institute and the General Office for Civil and Retirement Pensions. Transfers to the states and territories are excluded. Includes also expenditures financed with funds other than from the public sector; see footnote 2 of table 113.

[4] This item shows the expenditures of autonomous agencies and state enterprises financed with funds other than from the public sector. Expenditures of these agencies made out of funds granted or loaned by the Federal Government or by other authorities are included in the respective expenditures of the latter.

[5] See table 115.

TABLE 121

PUBLIC FINANCE

Financing of the Cash Deficit or Surplus of the Public Sector by Internal and External Sources, 1939-1951[1]

(Millions of pesos)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
I. *CASH DEFICIT OR SURPLUS OF THE PUBLIC SECTOR*[2] ...	**+6.7**	**—100.2**	**—93.1**	**—161.8**	**—72.2**	**—10.9**	**—352.6**	**—65.0**	**—401.2**	**—392.5**	**—49.1**	**—342.1**	**—558.5**
II. *CASH FINANCING OF THE DEFICIT OR SURPLUS*[3]	*—6.7*	*+100.2*	*+93.1*	*+161.8*	*+72.2*	*+10.9*	*+352.6*	*+65.0*	*+401.2*	*+392.5*	*+49.1*	*+342.1*	*+558.5*
A. **Domestic**[3]	**+6.2**	**+162.3**	**+11.5**	**+253.8**	**+89.6**	**+27.1**	**+348.0**	**—54.3**	**+301.8**	**+391.6**	**—106.5**	**+250.9**	**+317.6**
Funded long-term domestic debt (federal)[4]	+10.2	+137.0	+100.9	+160.1	+141.4	—31.9	+125.1	+26.6	+315.1	+230.3	+98.3	+53.6	—
Floating domestic short-term debt (federal)[5]	+61.4	—71.2	+9.7	+124.6	—28.3	+203.7	+93.8	—183.1	+50.7	+123.6	—100.5	—138.6	—100.0
Loans of Nacional Financiera to autonomous public agencies and state enterprises (gross)[6]	—	—	—	—	—	+3.0	+4.0	+13.0	+24.0	+38.7	+0.8	+9.3	+15.0
Loans of the National Mortgage and Public Works Bank to autonomous public agencies (gross)[6]	—	—	—	—	—	—	—	—	—	+6.1	+14.0	+19.5	+39.0
Non-specified loans (net)[7]	—9.2	—2.7	—9.0	+3.1	—7.1	—11.9	+44.3	+96.3	+91.6	—53.5	—106.5	+102.0	+19.2
Private grants[6]	—	—	—	—	—	—	—	—	—	+2.0	+24.0	+60.8	+191.6
Non-specified sources[6]	—	—	+2.3	+2.4	+3.0	+6.1	+14.3	+37.7	+5.4	+2.8	+4.5	+4.9	+5.0
Non-specified financing and changes in cash holdings[8]	—56.2	+99.2	—92.4	—36.4	—19.4	—141.9	+66.5	—44.8	—185.0	+41.6	—41.1	+139.4	+147.8

B. External[8]	—12.9	—62.1	+81.6	—92.0	—17.4	—16.2	+4.6	+119.3	+99.4	0.9	+155.6	+91.2	+240.9
External loans (gross)[9]	—	—	—	48.5	—	—	40.3	164.5	140.2	83.8	146.7	206.1	397.2
Amortization of funded external debt[10]	—	—	—1.8	—	—	—	—	—	—	—6.1	—7.1	—33.3	—25.4
Amortization of other external debt[11]	—	—	—	—3.4	—5.4	—5.5	—5.9	—20.4	—28.7	—57.0	—87.7	—129.9	—127.6
Payment of claims and indemnities[12]	—7.9	—3.0	—19.9	—90.0	—36.7	—30.3	—32.3	—31.3	—31.5	—77.2	—98.2	—86.0	—76.0
Grants[13]	—	—	—	10.0	+24.6	15.0	2.4	—	16.3	48.0	154.6	110.3	42.7
Private investment[14]	—	—	—	—	—	—	—	—	—	8.0	14.0	24.0	30.0
Floating external debt[15]	—5.0	—59.1	+103.3	—57.1	+0.1	4.6	0.1	6.5	3.1	1.4	33.3	—	—

Source: Combined Mexican Working Party, based on the sources indicated in the footnotes.

[1] The present table shows total excess of net public expenditures over net receipts (or viceversa) and the form in which the difference has been financed, by domestic and external sources, including the use or amortization of loans, as well as the use of non-reimbursable grants and subsidies and the use or accumulation of cash holdings.

[2] Data from table 120.

[3] A plus sign indicates cash financing of debt, the use of funds not representing debt creation or the use of cash holdings. A minus sign indicates cash amortization of debt or an increase in cash holdings. Therefore the net figure does not represent debt variations only. Available data do not allow a rigid separation between debt items, cash holdings and other financing items.

[4] Domestic cash financing, that is to say, excluding internal funded debt changes relating only to use of government bonds as security for foreign loans or for internal operations. Estimate of the Combined Mexican Working Party based on data of the Ministry of Finance, the Bank of Mexico and the Nacional Financiera. The figure for 1951 is estimated.

[5] Mainly the cash changes in Treasury Certificates, including other items of internal floating debt of the Federal Government accounted for in administration accounts. Source: 1939-1949, Ministry of Finance, Dirección de Estudios Hacendarios, Departamento de Estudios Económicos, special analysis of the Public Accounts; 1950, Bank of Mexico, Annual Report for 1951; 1951, estimated.

[6] Source: Table 21. Loans disbursed, excluding amortizations. The latter are included globally in the item "Non-specified financing" (see footnote 8).

[7] Same source as in footnote 6. Refers mainly to the floating debt of the National Railways of Mexico, a part of which may be external; mainly figures for net credit, that is, including amortization payments.

[8] Obtained by deduction. Includes non-specified loans, amortization of loans granted by Nacional Financiera and the National Mortgage and Public Works Bank (see note 6), changes in State and Municipal debts, loans from contractors, bond issues of the National Mortgage Bank for its own direct investments, etc.; also includes the net increase or decrease in cash holdings, not ascertainable.

[9] Source: Table 21. Loans disbursed, excluding amortizations. These are shown separately under the heading "amortization of other external debt".

[10] 1939-1948, Ministry of Finance, source indicated in footnote 5; 1949 and 1950, Bank of Mexico, Annual Report for 1951; 1951, Combined Mexican Working Party.

[11] 1939-1950, Nacional Financiera; 1951, Combined Mexican Working Party. This item includes amortizations paid to the Export-Import Bank and other foreign banks or enterprises which are creditors of the Federal Government agencies, autonomous public agencies and state enterprises.

[12] 1939-1948, Ministry of Finance, source indicated; 1949, 1950 and 1951, Combined Mexican Working Party. This item includes the agrarian claims and the petroleum industry indemnities.

[13] Foreign grants for financing certain expenses of the public sector (U.S. Railroad Mission, foot-and-mouth disease campaign, etc.). Source: table 21.

[14] Direct private investment financing of expenses of the public sector. Source: table 21.

[15] 1939-1948, Ministry of Finance, source indicated. Includes debt items of the Federal Government in administration accounts, such as balances of postal and telegraph services and occasional short-term operations.

TABLE 122

Mexico's Balance of Payments, 1939-1950
(Millions of Dollars)

	1939			1940			1941		
	Receipts	Payments	Net[1]	Receipts	Payments	Net[1]	Receipts	Payments	Net[1]
I. *CURRENT TRANSACTIONS*									
A. Merchandise exports and imports[2]	155.7	128.0	27.7	147.1	131.9	15.2	148.7	199.2	—50.5
B. Foreign Travel[3]	30.7	9.0	21.7	30.3	8.0	22.3	37.5	6.0	31.5
C. Interest on official debt[3]	—	[4]	[4]	—	[4]	[4]	—	[4]	[4]
D. Direct investment service[5]	—	19.5	—19.5	—	30.1	—30.1	—	39.4	—39.4
E. Personal remittances[3]	—	—	—	—	—	—	—	—	—
F. Other current items[6]	6.6	3.7	2.9	6.3	2.6	3.7	6.5	4.5	2.0
Total Current Transactions[7]	**193.0**	**160.2**	**32.8**	**183.7**	**172.6**	**11.1**	**192.7**	**249.1**	**—56.4**
II. *CAPITAL MOVEMENTS AND GRANTS*									
A. Private short-term (net)[8]	*	*	*	15.0	—	15.0	14.3	—	14.3
B. Official short-term[9]	—	—	—	—	—	—	—	—	—
Total Short-term Capital Movements[7]	—	—	—	*15.0*	—	*15.0*	*14.3*	—	*14.3*
C. Private Long-Term (net)[10]	28.5	—	28.5	—	9.8	—9.8	25.8	—	25.8
D. Government Loans and Amortization	—	1.6	—1.6	—	2.2	—2.2	—	4.7	—4.7
Total Long-Term Capital Movements	*28.5*	*1.6*	*26.9*	—	*12.0*	*—12.0*	*25.8*	*4.7*	*21.1*
Total Capital Movements	*28.5*	*1.6*	*26.9*	*15.0*	*12.0*	*3.0*	*40.1*	*4.7*	*35.4*
E. Grants from the United States[11]	—	—	—	—	—	—	—	—	—
Total Capital Movements and Grants	**28.5**	**1.6**	**26.9**	**15.0**	**12.0**	**3.0**	**40.1**	**4.7**	**35.4**
III. *SUMMARY*									
A. Net on Current Account[7]			32.8			11.1			—56.4
B. Net on Capital Movements and Grants[7]			26.9			3.0			35.4
C. Net Errors and Omissions[7]			—59.8			10.1			19.7
Surplus or Deficit[7]			**—0.1**			**24.2**			**—1.3**
IV. *COMPENSATORY OFFICIAL FINANCING*									
A. Payments and Clearing Agreements			—			—			—
B. IMF Resources			—			—			—
C. U. S. Stabilization Fund Loans			—			—			—
D. Net change in Official Foreign Exchange Reserves			3.5			—9.2			0.7
E. Monetary Gold			*—3.4*			*—15.0*			*0.6*
Total			**0.1**			**—24.2**			**1.3**

TABLE 122—(Continued)

MEXICO'S BALANCE OF PAYMENTS, 1939–1950
(Millions of Dollars)

	1942 Receipts	1942 Payments	1942 Net[1]	1943 Receipts	1943 Payments	1943 Net[1]	1944 Receipts	1944 Payments	1944 Net[1]
I. *CURRENT TRANSACTIONS*									
A. Merchandise exports and imports[2]	195.0	172.1	22.9	239.6	212.1	27.5	238.2	310.8	—72.6
B. Foreign Travel[3]	29.4	6.0	23.4	41.3	6.0	35.3	48.5	6.0	42.5
C. Interest on official debt[3]	—	0.2	—0.2	—	2.9	—2.9	—	1.5	—1.5
D. Direct investment service[5]	—	33.8	—33.8	—	47.9	—47.9	—	43.9	—43.9
E. Personal remittances[3]	—	—	—	36.3	—	36.3	50.4	—	50.4
F. Other current items[6]	8.1	7.4	0.7	11.0	11.1	—0.1	13.7	12.4	1.3
Total Current Transactions[7]	**232.5**	**219.5**	**13.0**	**328.2**	**280.0**	**48.2**	**350.8**	**374.6**	**—23.8**
II. *CAPITAL MOVEMENTS AND GRANTS*									
A. Private short-term (net)[8]	5.8	—	5.8	6.2	—	6.2	—	18.4	—18.4
B. Official short-term[9]	—	—	—	—	—	—	—	—	—
Total Short-term Capital Movements[7]	*5.8*	—	*5.8*	*6.2*	—	*6.2*	—	*18.4*	*—18.4*
C. Private Long-Term (net)[10]	26.1	—	26.1	0.6	—	0.6	27.7	—	27.7
D. Government Loans and Amortization	10.0	5.9	4.1	—	19.0	—19.0	—	10.4	—10.4
Total Long-Term Capital Movements	*36.1*	*5.9*	*30.2*	*0.6*	*19.0*	*—18.4*	*27.7*	*10.4*	*17.3*
Total Capital Movements	*41.9*	*5.9*	*36.0*	*6.8*	*19.0*	*—12.2*	*27.7*	*28.8*	*—1.1*
E. Grants from the United States[11]	—	—	—	—	—	—	—	—	—
Total Capital Movements and Grants	**41.9**	**5.9**	**36.0**	**6.8**	**19.0**	**—12.2**	**27.7**	**28.8**	**—1.1**
III. *SUMMARY*									
A. Net on Current Account[7]			13.0			48.2			—23.8
B. Net on Capital Movements and Grants[7]			36.0			—12.2			—1.1
C. Net Errors and Omissions[7]			—4.2			104.3			65.2
Surplus or Deficit[7]			**44.8**			**140.3**			**40.3**
IV. *COMPENSATORY OFFICIAL FINANCING*									
A. Payments and Clearing Agreements			—			—			—
B. IMF Resources			—			—			—
C. U. S. Stabilization Fund Loans			—			—			—
D. Net change in Official Foreign Exchange Reserves			—53.0			24.4			—20.8
E. Monetary Gold			*8.2*			*—164.7*			*—19.5*
Total			**—44.8**			**—140.3**			**—40.3**

TABLE 122—Continued

MEXICO'S BALANCE OF PAYMENTS, 1939–1950
(Millions of Dollars)

	1945			1946			1947		
	Receipts	Payments	Net[1]	Receipts	Payments	Net[1]	Receipts	Payments	Net[1]
I. *CURRENT TRANSACTIONS*									
A. Merchandise exports and imports[2]	280.1	372.3	—92.2	344.8	600.1	—255.3	472.8	719.2	—246.4
B. Foreign Travel[3]	60.9	10.0	50.9	101.2	13.9	87.3	96.9	14.1	82.8
C. Interest on official debt[3]	—	1.1	—1.1	—	1.6	—1.6	—	2.8	—2.8
D. Direct investment service[5]	—	48.5	—48.5	—	58.4	—58.4	—	92.7	—92.7
E. Personal remittances[3]	55.1	—	55.1	34.0	—	34.0	29.2	—	29.2
F. Other current items[6]	15.6	12.5	3.1	2.3	—	2.3	5.3	—	5.3
Total Current Transactions[7]	**411.7**	**444.4**	**—32.7**	**482.3**	**674.0**	**—191.7**	**604.2**	**828.8**	**—224.6**
II. *CAPITAL MOVEMENTS AND GRANTS*									
A. Private short-term (net)[8]	12.6	—	12.6	—	51.2	—51.2	—	16.7	—16.7
B. Official short-term[9]	—	—	—	—	2.5	—2.5	—	23.7	—23.7
Total Short-Term Capital Movements[7]	*12.6*	—	*12.6*	—	*53.7*	*—53.7*	—	*40.4*	*—40.4*
C. Private Long-Term (net)[10]	34.3	—	34.3	10.2	—	10.2	50.8	—	50.8
D. Government Loans and Amortization	8.3	8.0	0.3	37.4	15.1	22.3	31.8	19.7	12.1
Total Long-Term Capital Movements	*42.6*	*8.0*	*34.6*	*47.6*	*15.1*	*32.5*	*82.6*	*19.7*	*62.9*
Total Capital Movements	*55.2*	*8.0*	*47.2*	*47.6*	*68.8*	*—21.2*	*82.6*	*60.1*	*22.5*
E. Grants from the United States[11]	—	—	—	3.0	—	3.0	36.4	—	36.4
Total Capital Movements and Grants	**55.2**	**8.0**	**47.2**	**50.6**	**68.8**	**—18.2**	**119.0**	**60.1**	**58.9**
III. *SUMMARY*									
A. Net on Current Account[7]			—32.7			—191.7			—224.6
B. Net on Capital Movements and Grants[7]			47.2			—18.2			58.9
C. Net Errors and Omissions[7]			65.9			88.2			19.4
Surplus or Deficit[7]			**80.4**			**—121.7**			**—146.3**
IV. *COMPENSATORY OFFICIAL FINANCING*									
A. Payments and Clearing Agreements			—			—			—0.6
B. IMF Resources			—			—			22.5
C. U. S. Stabilization Fund Loans			—			—			20.0
D. Net change in Official Foreign Exchange Reserves			—7.2			7.3			25.2
E. Monetary Gold			—73.2			114.4			79.2
Total			**—80.4**			**121.7**			**146.3**

TABLE 122—(Continued)

Mexico's Balance of Payments, 1939–1950
(Millions of Dollars)

	1948 Receipts	1948 Payments	1948 Net[1]	1949 Receipts	1949 Payments	1949 Net[1]	1950† Receipts	1950† Payments	1950† Net[1]
I. *CURRENT TRANSACTIONS*									
A. Merchandise exports and imports[2]	464.1	597.4	—133.3	436.4	519.9	—83.5	533.8	597.3	—63.5
B. Foreign Travel[3]	116.2	12.1	104.1	137.6	5.3	132.3	162.5	6.3	156.2
C. Interest on official debt[3]	—	5.6	—5.6	—	10.1	—10.1	—	9.2	—9.2
D. Direct investment service[5]	—	77.1	—77.1	—	79.7	—79.7	—	51.3	—51.3
E. Personal remittances[3]	21.6	—	21.6	17.6	—	17.6	19.4	—	19.4
F. Other current items[6]	0.2	—	0.2	1.3	—	1.3	—	2.1	—2.1
Total Current Transactions[7]	**602.1**	**692.2**	**—90.1**	**592.9**	**615.0**	**—22.1**	**715.7**	**666.2**	**49.5**
II. *CAPITAL MOVEMENTS AND GRANTS*									
A. Private short-term (net)[8]	—	0.4	—0.4	—	27.5	—27.5	56.0	—	56.0
B. Official short-term[9]	—	—	—	—	—	—	—	—	—
Total Short-Term Capital Movements[7]	—	*0.4*	*—0.4*	—	*27.5*	*—27.5*	*56.0*	—	*56.0*
C. Private Long-Term (net)[10]	16.5	—	16.5	14.4	—	14.4	15.0	—	15.0
D. Government Loans and Amortization	18.7	23.6	—4.9	30.0	24.9	5.1	29.5	28.0	1.5
Total Long-Term Capital Movements	*35.2*	*23.6*	*11.6*	*44.4*	*24.9*	*19.5*	*44.5*	*28.0*	*16.5*
Total Capital Movements	*35.2*	*24.0*	*11.2*	*44.4*	*52.4*	*—8.0*	*100.5*	*28.0*	*72.5*
E. Grants from the United States[11]	9.6	—	9.6	24.7	—	24.7	14.0	—	14.0
Total Capital Movements and Grants	**44.8**	**24.0**	**20.8**	**69.1**	**52.4**	**16.7**	**114.5**	**28.0**	**86.5**

TABLE 122—(Continued)

MEXICO'S BALANCE OF PAYMENTS, 1939-1950

(Millions of Dollars)

	1948			1949			1950†		
	Receipts	Payments	Net[1]	Receipts	Payments	Net[1]	Receipts	Payments	Net[1]
III. *SUMMARY*									
A. Net on Current Account[7]			—90.1			—22.1			49.5
B. Net on Capital Movements and Grants[7]			20.8			16.7			86.5
C. Net Errors and Omissions[7]			8.5			47.4			71.3
Surplus or Deficit[7]			**—60.8**			**42.0**			**207.3**
IV. *COMPENSATORY OFFICIAL FINANCING*									
A. Payments and Clearing Agreements			—5.3			—0.2			0.6
B. IMF Resources			—			—			—
C. U. S. Stabilization Fund Loans			17.0			—			—37.0
D. Net change in Official Foreign Reserves			—10.4			—31.5			—15.5
E. Monetary Gold			59.5			—10.3			—155.4
Total			**60.8**			**—42.0**			**—207.3**

Source: For 1939-1945 Bank of Mexico, Departamento de Estudios Económicos; for 1946-1950, International Monetary Fund.

*Not available.

†Preliminary.

[1] No sign indicates receipt; minus sign indicates payment.

[2] Exports are f.o.b., imports are c.i.f. To the corrected customs data of the Bank of Mexico have been added nonmonetary gold and silver exports as reported by Estadística Minerometalúrgica for 1939-1945 and the International Monetary Fund for 1946-1950.

[3] Data of the Bank of Mexico for all years.

[4] Less than $50,000.

[5] Except for the 1950 figure, the data include reinvested earnings of subsidiaries and other foreign firms in Mexico.

[6] From 1946-1950, figures are net; Mexican donations of $7.3 million and $4.7 million in 1946 and 1947, respectively, are included; between 1946-1949, pensions and annuities are included.

[7] Totals may vary from sources quoted because of regrouping of items.

[8] For 1946-1950, private short-term capital obtained by combining "other private capital" and "commercial bank assets" in Mexican balance of payments data of the International Monetary Fund.

[9] Subscriptions to IMF and IBRD, and UNRRA contributions.

[10] Except for the 1950 figure, the data include reinvested earnings of subsidiaries and other foreign firms in Mexico, and movements on intercompany accounts.

[11] Primarily grants in connection with campaign to eradicate hoof-and-mouth disease, but also includes other grants from the Institute of Inter-American Affairs and Technical Assistance.

TABLE 123

CUMULATIVE BALANCE OF PAYMENTS FOR MEXICO[1]
1939-1950
(Millions of Dollars)

	Receipts	Payments	Net[2]
I. *CURRENT TRANSACTIONS*			
A. Merchandise exports and imports	3,656.3	4,560.3	—904.0
B. Foreign travel	893.0	102.7	790.3
C. Interest on official debt	—	35.0	—35.0
D. Direct investment service	—	622.3	—622.3
E. Personal remittances	263.6	—	263.6
F. Other current items	76.9	56.3	20.6
Total Current Transactions	**4,889.8**	**5,376.6**	**—486.8**
II. *CAPITAL MOVEMENTS AND GRANTS*			
A. Private short-term	109.9	114.2	—4.3
B. Official short-term	—	26.2	—26.2
Total Short-term Capital Movements	*109.9*	*140.4*	*—30.5*
C. Private long-term	249.9	9.8	240.1
1. Direct investment (net)	—	—	79.5
2. Reinvested earnings	—	—	116.5
3. Intercompany accounts (net)	—	—	44.1
D. Government loans and amortization	165.7	163.1	2.6
Total Long-term Capital Movements	*415.6*	*172.9*	*242.7*
Total Capital Movements	*525.5*	*313.3*	*212.2*
E. Grants from the United States	87.7	—	87.7
Total Capital Movements and Grants	**613.2**	**313.3**	**299.9**
III. *SUMMARY*			
A. Net on Current Account			—486.8
B. Net on Capital Movements and Grants			299.9
C. Net Errors and Omissions			436.0
Surplus			**249.1**

Source: Based on table 122.

[1] See footnotes in table 122.

[2] No sign indicates receipt; minus sign indicates payment.

TABLE 124

NET SHORT-TERM HOLDINGS OF MEXICAN INDIVIDUALS AND FIRMS ABROAD, 1939-1950[1]

(Millions of Dollars)

End of year	Amount
1939	45.6
1940	29.8
1941	15.8
1942	11.4
1943	3.9
1944	6.3
1945	32.4
1946	63.5
1947	66.2
1948	62.6
1949	94.7
1950	70.3

Source: Compiled by the Bank of Mexico, Departamento de Estudios Económicos, from data of the National Banking Commission and the U. S. Treasury.

[1] Computed by deducting short-term holdings by Mexican banks abroad, as given by the National Banking Commission, from total Mexican short-term holdings in the U. S. as given by the U. S. Treasury.

TABLE 125

AVERAGE RATIO OF IMPORTS TO NATIONAL INCOME[1] FOR VARIOUS COUNTRIES IN THE POSTWAR YEARS[2]

(Average Propensity to Import)

COUNTRY	Average Ratio of Imports to National Income
Iceland	43.6
Venezuela	38.5
Union of South Africa	38.0
Ireland	37.1
Cuba	29.2
New Zealand	26.9
Philippine Republic	26.9
Denmark	22.5
Canada	21.6
Argentina	21.4
Finland	19.8
Australia	19.0
Colombia	17.2
Mexico	13.0

Source: For countries other than Mexico, ratios computed from national income and imports data in IMF International Financial Statistics; for Mexico, Bank of Mexico.

[1] At factor cost, except in the case of the Philippines, where national income at market prices was given in the source quoted.

[2] Annual average of 1946-1950 for Mexico, Cuba, the Philippines, Canada, Australia and the Union of South Africa; annual average of 1947-1950 for Finland; annual average of 1946-1949 for Denmark, Ireland, New Zealand and Peru; annual average of 1946-1948 for Argentina and Colombia; annual average of 1945-1946 for Iceland; and annual average of 1947 and 1949 for Venezuela.

TABLE 126

INDICES OF VOLUME OF EXPORTS AND IMPORTS, 1939-1950
(1939 = 100)

Year	Exports[1]	Imports[1]
1939	100.0	100.0
1940	96.0	94.2
1941	98.0	138.2
1942	95.5	101.0
1943	100.9	118.4
1944	93.9	183.5
1945	102.6	212.2
1946	98.9	282.8
1947	110.3	289.8
1948	113.5	232.9
1949	129.2[2]	205.5
1950	146.8[2]	237.6

Source: Economic Commission for Latin America, except export data for 1949 and 1950.

[1] ECLA index on 1937 base, converted to 1939 = 100.

[2] Estimated by Combined Mexican Working Party by applying to the 1948 ECLA data the percentage increases for 1949 and 1950 over previous years in a deflated index of the value of exports.

TABLE 127

PER CAPITA EXPORTS
1939 - 1950

	Dollars per Capita		Pesos per Capita		Volume of Exports
Year	Value	Index (1939=100)	Value	Index (1939=100)	Per Capita (1939=100)
1939	8.0	100.0	41.6	100.0	100.0
1940	7.5	93.8	40.3	96.9	94.9
1941	7.4	92.5	35.8	86.1	94.1
1942	9.4	117.5	45.7	109.9	89.8
1943	11.3	141.3	54.8	131.7	92.4
1944	11.0	137.5	53.3	128.1	84.1
1945	12.6	157.5	61.2	147.1	89.6
1946	15.1	188.8	73.5	176.7	84.3
1947	20.2	252.5	98.2	236.1	91.4
1948	19.3	241.3	110.9	266.6	91.3
1949	17.6	220.0	141.6	340.4	101.0
1950	20.8	260.0	179.8	431.5	111.0

Source: Value data from corrected customs figures of Bank of Mexico; volume data from Economic Commission for Latin America; population data from Dirección General de Estadística.

TABLE 128

FOREIGN TRADE OF MEXICO, 1939-1950

Years	Total Trade (Millions U.S.$) (3)+(5) (1)	Total Trade (Index) (1939=100) (2)	Exports (Millions U.S.$) (3)	Exports (Index) (1939=100) (4)	Imports (Millions U.S.$) (5)	Imports (Index) (1939=100) (6)	Percents of Total Trade Exports (7)	Percents of Total Trade Imports (8)	Balance of Trade (Millions U.S.$) (3)—(5) (9)
1939	283.7	100.0	155.7	100.0	128.0	100.0	54.9	45.1	27.7
1940	279.0	98.3	147.1	94.7	131.9	103.0	52.7	47.3	15.2
1941	347.9	122.6	148.7	95.5	199.2	155.6	42.7	57.3	—50.5
1942	367.1	129.4	195.0	125.2	172.1	134.5	53.1	46.9	22.9
1943	451.7	159.2	239.6	153.9	212.1	165.7	53.0	47.0	27.5
1944	549.0	193.5	238.2	153.0	310.8	242.8	43.4	56.6	—72.6
1945	652.4	230.0	280.1	179.9	372.3	290.9	42.9	57.1	—92.2
1946	944.9	333.1	344.8	221.5	600.1	468.8	36.5	63.5	—255.3
1947	1,192.0	420.2	472.8	303.7	719.2	561.9	39.7	60.3	—246.4
1948	1,061.5	374.2	464.1	298.1	597.4	466.7	43.7	56.3	—133.3
1949	956.3	337.1	436.4	280.3	519.9	406.2	45.6	54.4	—83.5
1950	1,131.1	398.7	533.8	342.8	597.3	466.6	47.2	52.8	—63.5
					MEXICAN PESOS[1]				
	(Millions of Pesos)[2]		(Millions of Pesos)		(Millions of Pesos)				(Millions of Pesos)
1939	1,471.0	100.0	807.3	100.0	663.7	100.0	54.9	45.1	143.6
1940	1,507.7	102.5	794.9	98.5	712.8	107.4	52.7	47.3	82.1
1941	1,689.8	114.9	722.2	89.5	967.5	145.8	42.7	57.3	—245.3
1942	1,781.9	121.1	946.5	117.2	835.4	125.9	53.1	46.9	111.1
1943	2,191.2	149.0	1,162.3	144.0	1,028.9	155.0	53.0	47.0	133.4
1944	2,664.8	181.2	1,156.2	143.2	1,508.6	227.3	43.4	56.6	—352.4
1945	3,166.1	215.2	1,359.3	168.4	1,806.8	272.2	42.9	57.1	—447.5
1946	4,588.4	311.9	1,674.9	207.5	2,913.5	439.0	36.5	63.5	—1,238.6
1947	5,790.7	393.7	2,296.9	284.5	3,493.9	526.4	39.7	60.3	—1,197.0
1948	6,112.1	415.5	2,672.3	331.0	3,439.8	518.3	43.7	56.3	—767.5
1949	7,694.4	523.1	3,511.3	434.9	4,183.1	630.3	45.6	54.4	—671.8
1950	9,776.1	664.6	4,613.6	571.5	5,162.5	777.8	47.2	52.8	—548.9

Source: Customs data of the Dirección General de Estadística, corrected by the Bank of Mexico (Departamento de Estudios Económicos).

[1] Converted into pesos by average annual rates of exchange published by the Bank of Mexico.

[2] Items may not add up to totals because of rounding and conversion.

TABLE 129

Foreign Trade: Per Capita Imports, 1939-1950

Year	Dollars per Capita		Pesos per Capita		Volume of Imports Per Capita (1939=100)
	Value	Index (1939=100)	Value	Index (1939=100)	
1939	6.6	100.0	34.2	100.0	100.0
1940	6.7	101.5	36.2	105.8	93.0
1941	9.9	150.0	47.9	140.1	132.8
1942	8.3	125.8	40.3	117.8	94.9
1943	10.0	151.5	48.5	141.8	108.6
1944	14.3	216.7	69.5	203.2	164.4
1945	16.7	253.0	81.0	236.8	185.3
1946	26.3	398.5	127.6	373.1	241.0
1947	30.7	465.2	149.1	436.1	240.0
1948	24.8	375.8	142.8	417.5	187.4
1949	20.9	316.7	168.1	491.5	160.7
1950	23.3	353.0	201.4	588.9	179.6

Source: Value data based on statistics of the Dirección General de Estadística, corrected by the Bank of Mexico; data on volume based on index of Economic Commission of Latin America converted from 1937 to 1939 base; population data from Dirección General de Estadística.

TABLE 131

Foreign Trade:
Volume of Mineral, Agricultural and Manufactures Exports
1939 = 100[1]

Year	Metalurgical Minerals[2]	Agricultural Products	Manufactures
1939	100.0	100.0	100.0
1940	101.9	77.4	122.4
1941	95.1	104.6	194.1
1942	108.2	92.9	449.0
1943	118.5	130.9	704.9
1944	106.8	139.1	607.8
1945	118.0	121.4	975.2
1946	91.6	146.8	905.4
1947	108.8	173.3	710.1
1948	102.6	165.8	461.5
1949	107.6	223.9	394.3
1950	116.5	249.8	392.0

Source: Economic Commission of Latin America.

[1] Indexes were converted from 1937 bases.

[2] Excludes gold, silver, and petroleum products.

TABLE 130

FOREIGN TRADE: VALUE OF EXPORTS OF AGRICULTURAL PRODUCTS, MINERALS AND MANUFACTURES, 1939-1950

	Agricultural Products[1]			Minerals[2]			Manufactures[3]			Unclassified Exports		Total[4]
	Value (Millions of dollars)	Index (1939=100)	Percent of Total Exports	Value (Millions of dollars)	Index (1939=100)	Percent of Total Exports	Value (Millions of dollars)	Index (1939=100)	Percent of Total Exports	Value (Millions of dollars)	Percent of Total Exports	Exports (Millions of dollars)
1939	34.8	100.0	28.2	80.6	100.0	65.3	6.9	100.0	5.6	1.1	0.9	123.5
1940	31.1	89.4	25.0	84.9	105.3	68.1	8.0	115.9	6.4	0.6	0.5	124.6
1941	45.8	131.6	38.5	57.4	71.2	48.2	14.9	215.9	12.5	0.9	0.8	119.0
1942	59.2	170.1	40.4	62.2	77.2	42.5	22.9	331.9	15.6	2.1	1.4	146.4
1943	92.3	265.2	41.4	63.5	78.8	28.5	50.4	730.4	22.6	16.6	7.5	222.8
1944	94.1	270.4	45.0	51.1	63.4	24.4	59.3	859.4	28.3	4.6	2.2	209.2
1945	96.4	277.0	38.8	55.1	68.4	22.2	93.2	1,350.7	37.6	3.5	1.4	248.2
1946	127.8	367.2	43.5	58.8	73.0	20.0	102.7	1,488.4	34.9	4.6	1.6	293.9
1947	179.4	515.5	47.3	114.6	142.2	30.2	79.5	1,152.2	20.9	6.0	1.6	379.5
1948	176.3	506.6	41.3	160.4	199.0	37.5	85.1	1,233.3	19.9	5.6	1.3	427.3
1949	198.6	570.7	52.2	123.2	152.9	32.4	54.1	784.1	14.2	4.3	1.1	380.3
1950	242.8	697.7	55.4	144.5	179.3	33.0	44.7	647.8	10.2	6.4	1.4	438.4

Source: Regrouping of the Bank of Mexico's (Departamento de Estudios Económicos) classifications of uncorrected customs data of the Dirección General de Estadística.

NOTE: Items may not add up to totals because of rounding and conversion.

[1] Includes agricultural commodities, animals and animal products, and fish. The unavailability of corrected data for mineral exports as a whole has precluded the use of corrected data for agricultural exports.

[2] Includes only that portion of petroleum exports which is exported as crude oil.

[3] Grouping of Bank of Mexico based on uncorrected customs data.

[4] Uncorrected customs data for merchandise exports of Dirección General de Estadística, excluding securities, bills and coins.

TABLE 132

FOREIGN TRADE

Concentration of exports, 1939-1950
(Percent of total exports)

Commodity	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
	Percent to total of four leading exports											
Coffee	—	—	—	—	—	—	—	—	—	—	—	8.4
Tomatoes	—	—	—	—	—	—	5.5	—	—	—	—	—
Raw cotton	—	—	—	—	—	—	—	7.4	11.2	—	14.3	26.0
Textile manufactures	—	—	—	—	6.9	7.5	15.2	15.9	7.1	—	—	—
Henequen fiber	—	—	—	—	6.5	6.3	—	—	—	—	—	—
Lead[1]	13.1	10.0	9.3	8.4	8.7	8.3	8.3	5.9	10.6	16.5	13.8	13.1
Zinc[1]	—	—	—	6.3	6.3	6.8	5.8	—	—	6.8	7.9	—
Silver	22.0	20.0	18.0	12.9	—	—	—	8.8	6.9	7.3	8.4	6.9
Nonmonetary gold	21.4	22.4	9.6	16.3	—	—	—	—	—	—	—	—
Petroleum	10.2	11.2	9.8	—	—	—	—	—	—	9.3	—	—
Combined percentage to total exports	*66.7*	*63.6*	*46.7*	*43.9*	*28.4*	*28.9*	*34.8*	*38.0*	*35.8*	*39.9*	*44.4*	*54.4*
	Minimum number of commodities exceeding 50% of total exports											
Coffee	—	—	—	—	4.5	5.0	4.3	3.8	—	—	7.6	8.4
Tomatoes	—	—	—	—	3.2	6.2	5.5	3.9	—	—	—	—
Live cattle	—	—	—	—	4.1	—	—	—	—	—	—	—
Canned meat	—	—	—	—	—	—	—	—	—	4.6	—	—
Raw chicle	—	—	—	—	3.8	4.3	—	—	—	—	—	—
Raw cotton	—	—	—	—	—	4.9	—	7.4	11.2	5.7	14.3	26.0
Textile manufactures	—	—	—	5.3	6.9	7.5	15.2	15.9	7.1	—	—	—
Henequen fiber	—	—	—	—	6.5	6.3	—	—	—	—	—	—
Henequen manufactures	—	—	—	—	—	—	3.6	—	—	—	—	—
Lead[1]	13.1	—	9.3	8.4	8.7	8.3	8.3	5.9	10.6	16.5	13.8	13.1
Copper[1]	—	—	6.6	5.6	3.7	3.6	4.3	—	4.5	—	—	—
Zinc[1]	—	—	—	6.3	6.3	6.8	5.8	4.8	5.6	6.8	7.9	—
Silver	22.0	20.0	18.0	12.9	5.2	—	3.7	8.8	6.9	7.3	8.4	6.9
Nonmonetary gold	21.4	22.4	9.6	16.3	—	—	—	—	4.5	—	—	—
Petroleum	—	11.2	9.8	—	—	—	—	—	—	9.3	—	—
Combined percentage to total exports	*56.5*	*53.6*	*53.3*	*54.8*	*52.9*	*52.9*	*50.7*	*50.5*	*50.4*	*50.2*	*52.0*	*54.4*
Number of commodities	*3*	*3*	*5*	*6*	*10*	*9*	*8*	*7*	*7*	*6*	*5*	*4*

Source: Based on table 133.

[1] The percentages given for lead, copper and zinc are believed to be higher, although not significantly, than they are in reality for the reason given in footnote 8 of table 133.

TABLE 133

FOREIGN TRADE: VALUE OF SELECTED EXPORTS, 1939-1950
(Millions of Dollars)[1]

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
Coffee[2]	6.5	4.1	6.1	6.9	10.7	12.0	12.1	13.1	19.0	19.3	33.3	44.7
Rice[2]	0.2	[4]	0.5	1.5	0.3	[4]	—	[4]	2.3	5.7	6.4	2.8
Sugar[3]	0.3	[4]	[4]	0.1	[4]	—	—	[4]	0.2	5.3	3.7	2.1
Chickpeas[2]	2.9	3.3	4.3	2.3	6.5	2.7	1.0	2.9	10.6	8.4	2.1	2.0
Bananas[2]	6.1	2.9	2.2	3.0	4.7	4.6	4.6	6.5	7.9	6.5	5.6	4.6
Vanilla[2]	0.8	1.7	2.9	1.4	1.5	3.0	1.5	1.5	2.7	2.9	0.8	1.1
Tomatoes[2]	0.8	1.0	2.7	4.5	7.6	14.7	15.3	13.6	20.8	21.4	16.1	9.2
Peppers[2]	0.1	0.2	0.3	0.4	0.5	0.6	1.6	1.5	1.9	1.8	0.9	—
Live cattle[3]	3.6	3.2	4.8	7.3	9.9	5.2	8.2	9.6	0.2	[4]	—	—
Meat, fresh and refrigerated[3]	[4]	[4]	0.1	0.5	0.1	[4]	[4]	—	—	0.3	0.8	2.0
Meat, canned[3]	[4]	[4]	[4]	[4]	[4]	[4]	[4]	0.5	2.3	21.3	18.1	2.2
Fish, including shellfish[5]	0.7	0.9	0.6	1.0	3.0	3.5	4.3	5.1	6.1	12.1	18.6	19.2
Fish and shellfish preparations[2]	0.5	0.4	0.4	0.2	0.3	0.3	0.7	1.4	1.6	1.6	1.7	1.3
Chicle, raw[2]	3.9	4.4	5.2	5.4	9.2	10.3	8.3	10.7	7.5	5.4	2.3	4.8
Oilseeds and oils (edible and inedible)[6]	—	[4]	0.3	0.2	1.7	1.6	0.5	1.7	9.3	8.4	4.7	2.3
Feed[3]	0.6	0.7	0.9	2.1	3.4	2.7	1.9	3.5	4.8	5.2	4.3	6.7
Wax (candelilla)[2]	0.9	0.8	1.3	1.9	3.4	2.2	3.9	7.0	4.3	0.8	2.6	3.8
Cotton, raw[2]	1.3	1.0	3.2	0.2	2.1	11.6	9.1	25.6	52.8	26.2	62.5	138.8
Cotton lint[2]	0.2	0.3	0.5	1.0	1.3	0.8	0.7	1.7	2.4	1.4	1.6	3.9
Textile manufactures (soft fiber)[7]	0.1	0.2	0.9	10.3	16.6	17.9	42.5	54.9	33.6	15.6	10.1	12.2
Henequen fiber[2]	5.1	4.0	6.8	9.6	15.5	15.0	8.7	10.3	18.2	19.2	12.1	16.8
Ixtle lechuguilla[2]	1.4	0.9	1.0	2.9	2.5	2.2	1.5	1.2	2.6	2.0	1.9	1.6
Ixtle de palma[3]	0.4	0.3	0.4	0.7	1.9	2.0	1.3	0.9	1.9	0.5	0.2	0.2
Henequen manufactures[2]	0.3	0.5	0.7	1.9	2.3	5.9	10.2	8.0	11.7	12.1	7.3	5.5
Ixtle (lechuguilla) manufactures[2]	0.1	0.2	0.3	0.6	0.7	1.0	1.5	3.6	3.6	1.9	1.5	1.6
Rubber (guayule)[2]	0.6	0.9	1.3	2.1	4.2	3.9	7.1	3.1	1.6	0.1	—	—
Lead[8]	20.4	14.7	13.9	16.4	20.8	19.8	23.3	20.2	50.2	76.4	60.4	70.1
Copper[8]	8.6	9.3	9.8	11.0	8.9	8.6	12.0	11.9	21.2	18.7	23.5	24.6

Zinc[8]	6.8	6.4	9.1	12.2	15.1	16.2	16.2	16.7	26.5	31.5	34.3	25.3
Antimony[3]	2.2	3.9	1.6	1.6	1.9	1.6	1.2	0.9	1.5	2.3	1.4	1.2[2]
Graphite[3]	0.2	0.3	0.2	0.3	0.4	0.4	0.6	0.5	0.5	0.6	0.4	0.5
Mercury[3]	0.5	1.8	3.4	5.3	4.7	2.7	1.4	0.8	0.7	0.2	0.3	0.3[2]
Arsenic[3]	0.5	0.6	0.7	1.0	0.9	0.9	0.9	0.7	0.8	0.7	0.4	0.8
Cadmium[3]	—	—	—	—	1.0	1.0	1.4	1.1	2.3	—	[4]	1.8[2]
Molybdenum[3]	0.9	0.5	0.7	1.2	1.0	0.8	0.8	0.4	0.1	—	—	—
Iron[3]	0.1	[4]	[4]	[4]	0.1	1.0	0.2	0.8	0.8	0.5	0.5	0.6[2]
Manganese[3]	[4]	[4]	0.1	0.6	0.9	1.1	0.5	0.3	1.0	1.0	0.9	1.1[2]
Bismuth[3]	—	—	0.1	0.3	0.3	0.3	0.2	0.3	0.6	0.7	1.2	1.0
Silver[9]	34.3	29.4	26.8	25.1	12.5	7.8	10.5	30.4	32.8	33.8	36.5	37.0
Nonmonetary gold[9]	33.3	32.9	14.3	31.7	6.5	3.2	4.0	1.0	21.1	10.8	4.2	11.8
Petroleum[10]	15.9	16.5	14.5	7.5	7.5	6.7	8.4	11.8	9.3	43.0	16.4	32.0

Source: Unadjusted customs data of the Dirección General de Estadística; adjusted data of the Bank of Mexico; and Estadística Minerometalúrgica, Ministry of Finance and Public Credit.

[1] Converted into dollars where necessary by average annual rates of exchange of the Bank of Mexico.

[2] Customs data corrected by Bank of Mexico, Departamento de Estudios Económicos.

[3] Customs data of Dirección General de Estadística.

[4] Less than $50,000.

[5] Customs data corrected by Bank of Mexico for fish caught by foreigners and understatement of exports of shrimp.

[6] Customs data for flaxseeds only were corrected by Bank of Mexico; other data (including other oilseeds, cottonseed oil, etc.) remain uncorrected.

[7] Manufactures of henequen and ixtle were subtracted from the Bank of Mexico's textile group (uncorrected) to obtain the soft fiber textiles exports.

[8] Customs data of the Dirección General de Estadística, partly corrected by the Bank of Mexico. For 1939-1940 and 1946-1950, there is included in the values for lead, zinc, and copper exports, and perhaps for other metals as well, an unknown quantity of precious metals which tends to inflate the export values of the metals shown in this table. It has not been possible, however, to correct this defect in the data.

[9] For 1939-1945, Estadística Minerometalúrgica; for 1946-1950, net exports from the International Monetary Fund based on Estadística Minerometalúrgica.

[10] Uncorrected customs data of Dirección General de Estadística. These figures are generally lower than those of Petroleos Mexicanos, which include crude oil sent to the U. S. for refining and reshipment to Mexico.

TABLE 134

Foreign Trade: Selected Exports, Percent of Total Value of Exports, 1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
Coffee	4.2	2.9	4.1	3.5	4.5	5.0	4.3	3.8	4.0	4.2	7.6	8.4
Rice	0.1	[1]	0.3	0.8	0.1	[1]	—	[1]	0.5	1.2	1.5	0.5
Sugar	0.2	[1]	[1]	0.1	[1]	—	—	[1]	[1]	1.1	0.8	0.4
Chickpeas	1.9	2.2	2.9	1.2	2.7	1.1	0.4	0.8	2.2	1.8	0.5	0.4
Bananas	3.9	2.0	1.5	1.5	2.0	1.9	1.6	1.9	1.7	1.4	1.3	0.9
Vanilla	0.5	1.2	2.0	0.7	0.6	1.3	0.5	0.4	0.6	0.6	0.2	0.2
Tomatoes	0.5	0.7	1.8	2.3	3.2	6.2	5.5	3.9	4.4	4.6	3.7	1.7
Peppers	0.1	0.1	0.2	0.2	0.2	0.3	0.6	0.4	0.4	0.4	0.2	—
Live cattle	2.3	2.2	3.2	3.7	4.1	2.2	2.9	2.8	[1]	[1]	—	—
Meat, fresh and refrigerated	[1]	[1]	0.1	0.3	[1]	[1]	[1]	—	—	0.1	0.2	0.4
Meat, canned	[1]	[1]	[1]	[1]	[1]	[1]	[1]	0.1	0.5	4.6	4.1	0.4
Fish, including shellfish	0.4	0.6	0.4	0.5	1.3	1.5	1.5	1.5	1.3	2.6	4.3	3.6
Fish and shellfish preparations	0.3	0.3	0.3	0.1	0.1	0.1	0.2	0.4	0.3	0.3	0.4	0.2
Chicle, raw	2.5	3.0	3.5	2.8	3.8	4.3	3.0	3.1	1.6	1.2	0.5	0.9
Oilseeds and oils (edible and inedible)	—	[1]	0.2	0.1	0.7	0.7	0.2	0.5	2.0	1.8	1.1	0.4
Feed	0.4	0.5	0.6	1.1	1.4	1.1	0.7	1.0	1.0	1.1	1.0	1.3
Wax (candelilla)	0.6	0.5	0.9	1.0	1.4	0.9	1.4	2.0	0.9	0.2	0.6	0.7
Cotton, raw	0.8	0.7	2.2	0.1	0.9	4.9	3.2	7.4	11.2	5.7	14.3	26.0
Cotton lint	0.1	0.2	0.3	0.5	0.5	0.3	0.2	0.5	0.5	0.3	0.4	0.7
Textile manufactures (soft fiber)	0.1	0.1	0.6	5.3	6.9	7.5	15.2	15.9	7.1	3.4	2.3	2.3
Henequen fiber	3.3	2.7	4.6	4.9	6.5	6.3	3.1	3.0	3.8	4.1	2.8	3.1
Ixtle lechuguilla	0.9	0.6	0.7	1.5	1.0	0.9	0.5	0.3	0.5	0.4	0.4	0.3
Ixtle de palma	0.3	0.2	0.3	0.4	0.8	0.8	0.5	0.3	0.4	0.1	[1]	[1]
Henequen manufactures	0.2	0.3	0.5	1.0	1.0	2.5	3.6	2.3	2.5	2.6	1.7	1.0
Ixtle (lechuguilla manufactures)	0.1	0.1	0.2	0.3	0.3	0.4	0.5	1.0	0.8	0.4	0.3	0.3
Rubber (guayule)	0.4	0.6	0.9	1.1	1.8	1.6	2.5	0.9	0.3	[1]	—	—
Lead[2]	13.1	10.0	9.3	8.4	8.7	8.3	8.3	5.9	10.6	16.5	13.8	13.1

Copper[2]	5.5	6.3	6.6	5.6	3.7	3.6	4.3	3.5	4.5	4.0	5.4	4.6
Zinc[2]	4.4	4.4	6.1	6.3	6.3	6.8	5.8	4.8	5.6	6.8	7.9	4.7
Antimony	1.4	2.7	1.1	0.8	0.8	0.7	0.4	0.3	0.3	0.5	0.3	0.2
Graphite	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Mercury	0.3	1.2	2.3	2.7	2.0	1.1	0.5	0.2	0.2	[1]	0.1	0.1
Arsenic	0.3	0.4	0.5	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.2
Cadmium	—	—	—	—	0.4	0.4	0.5	0.3	0.5	—	[1]	0.3
Molybdenum	0.6	0.3	0.5	0.6	0.4	0.3	0.3	0.1	[1]	—	—	—
Iron	0.1	[1]	[1]	[1]	[1]	0.4	0.1	0.2	0.2	0.1	0.1	0.1
Manganese	[1]	[1]	0.1	0.3	0.4	0.5	0.2	0.1	0.2	0.2	0.2	0.2
Bismuth	—	—	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2
Silver	22.0	20.0	18.0	12.9	5.2	3.3	3.7	8.8	6.9	7.3	8.4	6.9
Nonmonetary gold (net exports)	21.4	22.4	9.6	16.3	2.7	1.3	1.4	0.3	4.5	2.3	1.0	2.2
Petroleum	10.2	11.2	9.8	3.8	3.1	2.8	3.0	3.4	2.0	9.3	3.8	6.0

Source: Based on table 133.

NOTE: Items may not add up to totals because of rounding.

[1] Less than one-tenth of one percent.

[2] The percentages given for lead, copper and zinc are believed to be higher, although not significantly higher, than they are in reality for the reason given in footnote 8 of table 133.

TABLE 135

FOREIGN TRADE:
VOLUME OF EXPORTS OF PRECIOUS METALS AND PETROLEUM, 1939-1950

Years	Gold[1] and Silver	Petroleum[1] and Derivatives
1939	100.0	100.0
1940	97.1	103.6
1941	96.7	88.4
1942	88.1	35.3
1943	27.3	33.7
1944	15.9	29.7
1945	23.7	39.5
1946	46.1	45.4
1947	59.2	32.0
1948	53.2	120.8
1949	64.0	46.7
1950	62.6	90.8

Source: Economic Commission for Latin America.

[1] Converted from 1937 base to 1939 = 100

TABLE 136

VALUE OF FOREIGN TRADE IN PETROLEUM AND PETROLEUM PRODUCTS, 1939-1950
(Millions of Dollars)

Year	Exports	Imports	Balance
1939	15.3	4.7	10.6
1940	17.4	5.2	12.2
1941	14.8	7.1	7.7
1942	6.8	5.3	1.5
1943	7.7	6.4	1.3
1944	7.7	6.8	0.9
1945	9.8	9.3	0.5
1946	13.7	12.3	1.4
1947	25.0	19.4	5.6
1948	29.5	22.5	7.0
1949	26.6	26.9	—0.3
1950	42.4	28.5	13.9

Source: Petróleos Mexicanos.

TABLE 137

FOREIGN TRADE

Value of Imports by Groups, 1939-1950

	Consumer Goods[1]			Raw and Semiprocessed Materials[2]			Capital Goods[3]			Fuel, Lubricants and Electric Power[4]			Unclassified Imports[5]	Total Imports[6]
Years	(Millions of dollars)	Index	% of total imports	(Millions of dollars)	Index	% of total imports	(Millions of dollars)	Index	% of total imports	(Millions of dollars)	Index	% of total imports	(Millions of dollars)	(Millions of dollars)
1939	29.7	100.0	24.5	47.1	100.0	38.9	29.5	100.0	24.4	2.8	100.0	2.3	11.9	121.0
1940	29.4	99.0	23.7	50.5	107.2	40.8	28.3	95.9	22.9	3.8	135.7	3.1	11.7	124.1
1941	48.2	162.2	25.6	69.6	147.8	37.0	50.0	169.5	26.6	5.3	189.3	2.8	15.2	188.3
1942	38.4	129.3	24.8	67.2	142.7	43.4	31.1	105.4	20.1	4.8	171.4	3.1	13.5	155.0
1943	50.8	171.0	28.6	72.6	154.1	40.9	34.9	118.3	19.7	5.8	207.1	3.3	13.4	177.4
1944	92.8	312.5	33.4	102.8	218.3	37.0	56.4	191.2	20.3	7.9	282.1	2.8	17.9	277.8
1945	93.7	315.5	28.4	110.8	235.2	33.5	94.5	320.3	28.6	10.2	364.3	3.1	21.1	330.3
1946	161.8	544.8	29.8	145.6	309.1	26.8	173.2	587.1	31.9	15.2	542.9	2.8	47.2	543.0
1947	173.6	584.5	26.3	174.0	369.4	26.4	227.9	772.5	34.5	19.4	692.9	2.9	65.2	660.2
1948	95.0	319.9	18.3	144.5	306.8	27.8	203.9	691.2	39.2	22.0	785.7	4.3	46.4	519.9
1949	78.8	265.3	17.7	130.8	277.7	29.4	165.2	560.0	37.1	20.4	728.6	4.7	42.9	445.6
1950	93.9	316.2	18.4	151.7	322.1	29.8	194.4	659.0	38.2	20.4	728.6	4.0	48.8	509.4

Source: Based on a regrouping of the Bank of Mexico's (Departamento de Estudios Económicos) classification of uncorrected customs data of the Dirección General de Estadística.

NOTE: Items may not add up to totals because of rounding and conversion.

[1] Consolidation of the following Bank of Mexico categories as shown in table 138: Nos. 2, 3, 7, 8 and 11.

[2] Consolidation of following Bank of Mexico categories: Nos. 1, 5 and 6.

[3] Consolidation of following Bank of Mexico categories: Nos. 9 and 10.

[4] Same as Bank of Mexico category No. 4.

[5] Same as Bank of Mexico category No. 12.

[6] Uncorrected customs data of Dirección General de Estadística. Because the Bank of Mexico corrects its imports for undervaluation on a global basis, it is impossible to apportion the corrections among the groups used in this table. For this reason the unadjusted customs data for total imports has been used in this table.

TABLE 138

FOREIGN TRADE

Value of Imports by Categories, 1939-1950
(Millions of Dollars)[1]

CATEGORY	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
1. Production goods used on farms (except agricultural machinery)	1.2	1.2	2.1	1.9	2.5	3.8	4.5	4.3	3.1	4.4	3.9	3.9
2. Materials for food and beverage industry	4.2	1.9	6.1	7.1	18.0	38.9	26.2	29.7	35.1	30.6	26.2	34.8
3. Foodstuffs	2.5	2.7	5.9	4.8	4.8	16.9	21.1	42.1	23.0	12.1	8.4	8.4
4. Fuels, lubricants and electric power	2.8	3.8	5.3	4.8	5.8	7.9	10.2	15.2	19.4	22.0	20.4	20.4
5. Nondurable raw and semi-processed materials	32.3	33.5	47.6	49.0	48.9	65.4	68.8	87.5	105.7	94.8	77.6	95.8
6. Durable raw and semi-processed materials	13.7	15.8	19.9	16.3	21.1	33.5	37.5	53.8	65.1	45.4	49.3	52.1
7. Nondurable consumption goods	4.6	4.0	5.8	5.6	7.0	9.0	11.6	16.9	20.2	16.0	16.9	18.4
8. Durable consumption goods	5.2	5.3	8.4	8.9	9.7	12.4	16.2	26.0	32.9	13.9	7.1	8.8
9. Equipment, machines, apparatus and tools	10.4	11.1	15.0	11.5	13.8	22.5	30.3	45.7	61.4	62.3	51.4	56.7
10. Capital goods	19.0	17.2	35.0	19.6	21.1	33.8	64.2	127.5	166.5	141.6	113.8	137.7
11. Luxury goods	13.2	15.5	22.0	11.9	11.2	15.6	18.6	47.1	62.5	22.3	20.1	23.6
12. Unclassified	11.9	11.7	15.2	13.5	13.4	17.9	21.1	47.2	65.2	54.6	50.5	48.8
Total Imports	*121.0*	*124.1*	*188.3*	*155.0*	*177.4*	*277.8*	*330.3*	*543.0*	*660.2*	*519.9*	*445.6*	*509.4*

Source: Bank of Mexico grouping of unadjusted customs data of Dirección General de Estadística.

NOTE: Items may not add up to totals because of rounding and conversion.

[1] Converted into dollars by average annual exchange rates of the Bank of Mexico.

TABLE 139

FOREIGN TRADE

Value and Volume of Selected Groups of Imports, 1939-1950

	Foodstuffs[1]			Consumer Durable Goods			Capital Goods[2]			Fuels, Lubricants and Electric Power		
	(Millions of dollars)	Index (value)	Index (volume)	(Millions of dollars)	Index (value)	Index (volume)	(Millions of dollars)	Index (value)	Index (volume)	(Millions of dollars)	Index (value)	Index (volume)
1939	6.7	100.0	100.0	5.2	100.0	100.0	29.5	100.0	100.0	2.8	100.0	100.0
1940	4.6	68.7	53.3	5.3	101.9	124.6	28.3	95.9	111.1	3.8	135.7	131.6
1941	12.1	180.6	203.6	8.4	161.5	156.0	50.0	169.5	167.0	5.3	189.3	193.2
1942	12.0	179.1	128.5	8.9	171.2	68.3	31.1	105.4	100.4	4.8	171.4	160.4
1943	22.8	340.3	257.8	9.7	186.5	30.1	34.9	118.3	152.3	5.8	207.1	183.7
1944	55.8	832.8	521.4	12.4	238.5	24.6	56.4	191.2	238.4	7.9	282.1	234.7
1945	47.3	706.0	458.9	16.2	311.5	27.0	94.5	320.3	317.2	10.2	364.3	292.2
1946	71.9	1,073.1	553.6	26.0	500.0	170.2	173.2	587.1	425.0	15.2	542.9	387.8
1947	58.1	867.2	333.2	32.9	632.7	255.2	227.9	772.5	473.3	19.4	692.9	454.7
1948	42.8	638.8	243.0	13.9	267.3	112.8	203.9	691.2	375.4	22.0	758.7	505.5
1949	34.6	516.4	222.2	7.1	136.5	105.2	165.2	560.0	327.1	20.4	728.6	507.8
1950	43.1	643.3	236.1	8.8	169.2	102.7	194.4	659.0	363.5	20.4	728.6	539.7

Source: Value data from Bank of México, (Departamento de Estudios Económicos), categories based on uncorrected customs data of the Dirección General de Estadística; quantity data from Economic Commission for Latin America.

[1] Consolidation of Bank of Mexico's categories Nos. 2 and 3. See table 138.

[2] Consolidation of Bank of Mexico's categories Nos. 9 and 10. See table 138.

TABLE 140

FOREIGN TRADE

Volume and Value of Imports by Selected Subgroups, 1939-1950

	Glass, Crystal, Crockery and Porcelain		Fats and Oils		Textiles		Skins, Hides and their Manufactures	
	Value[1] (Millions of dollars)	Volume[2] (1939=100)	Value[1] (Millions of dollars)	Volume[2] (1939=100)	Value[3] (Millions of dollars)	Volume (1937=100)[4]	Value[1] (Millions of dollars)	Volume[2] (1939=100)
1939	0.9	100.0	3.5	100.0	6.6	*	1.4	100.0
1940	0.8	107.4	4.6	131.3	7.4	*	1.0	67.8
1941	1.3	157.3	5.8	158.1	10.4	*	1.5	104.4
1942	1.8	210.9	4.3	70.7	11.4	*	1.9	96.7
1943	2.2	245.5	3.3	42.1	12.6	*	5.9	287.6
1944	2.3	216.6	11.9	145.8	13.4	*	6.0	191.9
1945	2.3	198.5	8.7	105.5	15.4	*	7.3	230.3
1946	3.0	261.8	17.4	143.0	24.2	170.1	8.4	261.2
1947	3.8	265.7	11.8	72.3	32.2	163.6	4.2	117.2
1948	1.1	84.0	5.8	39.4	23.6	119.6	2.0	76.3
1949	1.3	73.8	5.0	55.1	14.0	76.0	0.8	33.8
1950	0.9	54.1	3.7	46.0	12.3	92.9	1.2	38.0

TABLE 140—Continued

Volume and Value of Imports by Selected Subgroups, 1939-1950

	Timber, Pulp, Paper and Cardboard		Rubber and its Manufactures		Chemical and Pharmaceutical Products	
	Value[1] (Millions of dollars)	Volume[2] (1939=100)	Value[1] (Millions of dollars)	Volume[2] (1939=100)	Value[1] (Millions of dollars)	Volume[2] (1939=100)
1939	5.3	100.0	2.5	100.0	12.9	100.0
1940	6.2	107.2	2.0	71.9	12.1	92.5
1941	6.9	118.8	3.0	124.5	14.6	109.9
1942	11.7	171.0	0.7	26.4	18.1	109.5
1943	9.4	133.6	2.2	44.3	18.0	116.9
1944	10.1	134.6	4.6	84.5	22.9	150.0
1945	11.6	162.9	6.5	111.0	24.4	153.8
1946	15.7	192.8	7.5	169.5	30.7	165.6
1947	22.9	204.0	9.4	234.3	38.1	190.6
1948	18.3	159.6	7.0	218.6	32.6	229.6
1949	15.6	130.6	4.8	181.0	31.9	213.0
1950	16.7	141.7	7.7	191.5	41.8	277.6

Source: Economic Commission for Latin America.

*Not available.

[1] Converted from pesos into dollars by average annual exchange rates of the Bank of Mexico. Amounts for 1949 and 1950 estimated by the Combined Mexican Working Party, by multiplying the ECLA volume and price indexes for each year and converting the result into dollars terms.

[2] Converted from 1937 base to 1939 = 100.

[3] Anuario Estadístico del Comercio Exterior.

[4] Index was not converted to 1939 base because data for 1939 was not available.

TABLE 141

FOREIGN TRADE

Value of selected imports and percent of total, 1939-1950

COMMODITY	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
							(Millions of dollars)					
Corn	1.6	0.2	[1]	[1]	1.2	8.9	2.8	0.6	0.1	0.1	[1]	[1]
Wheat	1.3	[1]	4.3	4.2	12.9	21.3	17.1	18.1	24.7	25.0	22.3	30.7
Wheat flour	[1]	[1]	[1]	[1]	[1]	3.9	0.9	4.7	2.6	0.8	[1]	[1]
Lard	0.6	1.0	1.4	2.3	2.1	9.6	5.7	10.0	7.2	3.5	2.9	2.9
Wool	1.9	1.9	3.9	5.0	3.0	8.6	8.7	6.7	5.2	3.6	5.3	6.9
Rayon	2.8	2.7	4.2	2.1	3.8	5.2	5.3	8.3	9.0	9.4	3.5	5.5
Rayon cord	—	—	—	—	—	—	0.6	1.1	1.5	3.0	2.1	2.7
Autos, trucks and busses	13.6	15.2	25.3	11.7	4.0	8.0	14.0	42.7	80.2	36.1	34.3	37.3
Iron and steel products	7.3	7.1	8.7	6.3	10.6	20.1	21.8	27.0	33.6	23.3	32.1	31.5
Electric Power	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.5	0.6	0.6	0.5
Petroleum products	2.7	3.6	5.1	4.6	5.5	7.6	9.8	14.8	18.8	20.7	18.7	19.5
Total Imports[2]	*121.0*	*124.1*	*188.3*	*155.0*	*177.4*	*277.8*	*330.3*	*543.0*	*660.2*	*519.9*	*445.6*	*509.4*
							(Percent of total)					
Corn	1.3	0.2	[3]	[3]	0.7	3.2	0.8	0.1	[3]	[3]	[3]	[3]
Wheat	1.1	[3]	2.3	2.7	7.3	7.7	5.2	3.3	3.7	4.9	5.1	6.0
Wheat flour	[3]	[3]	[3]	[3]	[3]	1.4	0.3	0.9	0.4	0.2	[3]	[3]
Lard	0.5	0.8	0.7	1.5	1.2	3.5	1.7	1.8	1.1	0.7	0.7	0.6
Wool	1.6	1.5	2.1	3.2	1.7	3.1	2.6	1.2	0.8	0.7	1.2	1.4
Rayon	2.3	2.2	2.2	1.4	2.1	1.9	1.6	1.5	1.4	1.8	0.8	1.1
Rayon cord	—	—	—	—	—	—	0.2	0.2	0.2	0.6	0.5	0.5
Autos, trucks and busses	11.2	12.3	13.4	7.5	2.3	2.9	4.2	7.9	12.1	6.9	7.8	7.3
Iron and steel products	6.0	5.7	4.6	4.1	6.0	7.2	6.6	5.0	5.1	4.6	7.2	6.2
Electric power	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Petroleum products	2.2	2.9	2.7	3.0	3.1	2.7	3.0	2.7	2.9	4.0	4.3	3.8

Source: Unadjusted data of Dirección General de Estadística.

[1] Less than $50,000.

[2] Excludes securities, paper money and coins.

[3] Less than one-tenth of one percent.

TABLE 142

ESTIMATED SHARE OF THE UNITED STATES IN TOTAL MEXICAN CURRENT AND CAPITAL RECEIPTS IN 1950

Category	Total Receipts (Millions of dollars)	U. S. Percentage	U. S. Total (Millions of dollars)
Merchandise exports	533.8	80[1]	427.0
Foreign travel	162.5	90[2]	146.3
Personal remittances	19.4	100	19.4
Other current receipts	17.3	85	14.7
Grants from U.S.	14.0	100	14.0
Private short-term capital	56.0	90	50.4
Private long-term capital	15.0	95[3]	14.3
Government loans	29.5	100[4]	29.5
Total Current and Capital Receipts	*847.5*	*84.4*	*715.6*

Source: Combined Mexican Working Party.

[1] The 1950 percentage for exports to the U.S. was actually 85.5% of the total.

[2] Based on number of U.S. residents who enter Mexico as tourists. In 1949, 95% of the tourists entering Mexico were U.S. residents.

[3] Based on ownership of foreign enterprises in Mexico.

[4] Includes U.S. dollar portion of International Bank loans.

TABLE 143

FOREIGN TRADE

Geographic Distribution of Imports, 1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
							(Millions of dollars)					
TOTAL IMPORTS[1]	*121.0*	*124.1*	*188.3*	*155.0*	*177.4*	*277.8*	*330.3*	*543.0*	*660.2*	*519.9*	*445.6*	*509.4*
NORTH AMERICA	*81.1*	*100.3*	*161.1*	*139.1*	*159.4*	*242.6*	*279.6*	*461.1*	*592.8*	*455.5*	*393.3*	*441.4*
United States	79.8	97.5	158.7	134.8	156.0	237.4	272.3	453.9	583.4	444.4	381.0	429.9
Canada	1.3	2.7	2.5	4.3	3.4	5.2	7.4	7.2	9.4	11.1	12.3	11.5
Other	[2]	[2]	[2]	—	—	[2]	[2]	—	[2]	[2]	—	[2]
LATIN AMERICAN	*1.2*	*1.9*	*5.8*	*6.5*	*9.8*	*22.0*	*29.0*	*42.3*	*10.4*	*4.4*	*3.1*	*4.7*
EUROPE	*35.1*	*16.9*	*14.0*	*8.4*	*7.6*	*8.3*	*16.3*	*35.7*	*51.3*	*47.2*	*35.5*	*53.0*
Italy	2.7	2.1	1.3	[2]	[2]	[2]	[2]	1.0	2.0	6.9	2.4	4.1
Germany	15.5	1.6	0.4	[2]	[2]	[2]	[2]	[2]	[2]	0.3	1.8	7.2
Belgium	2.0	0.9	[2]	[2]	—	—	0.1	1.2	2.6	2.1	2.0	4.1
France	4.0	2.4	[2]	[2]	[2]	[2]	0.1	1.9	5.3	2.2	2.7	0.6
Great Britain	2.9	3.0	6.4	5.7	3.8	3.6	4.9	10.5	13.5	15.0	9.8	11.7
Netherlands	1.1	0.5	[2]	[2]	—	[2]	[2]	0.5	2.0	1.3	1.1	1.8
Sweden	2.4	1.6	1.5	0.1	[2]	[2]	3.7	8.4	9.4	7.9	5.0	7.2
Switzerland	1.5	1.8	1.8	1.7	2.2	1.8	3.7	5.3	8.1	6.0	6.2	5.3
Other	3.1	3.0	2.6	0.9	1.6	2.9	3.9	7.1	8.5	5.4	4.5	11.0
ASIA	*2.6*	*3.7*	*6.1*	*0.4*	[2]	[2]	*0.1*	*0.3*	*2.9*	*3.9*	*3.1*	*5.1*
AFRICA	*0.4*	*0.3*	*0.1*	[2]	*0.1*	*0.1*	*0.2*	*0.5*	*0.1*	*0.1*	*0.4*	*0.3*
OCEANIA	*0.6*	*0.7*	*1.2*	*0.6*	*0.6*	*4.8*	*5.1*	*3.2*	*2.7*	*1.2*	*2.7*	*4.8*

(Percent of total imports)

TOTAL	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
NORTH AMERICA	*67.0*	*80.8*	*85.6*	*89.7*	*89.9*	*87.3*	*84.7*	*84.9*	*89.8*	*87.6*	*88.3*	*86.7*
United States	66.0	78.6	84.3	87.0	88.0	85.5	82.4	83.6	88.4	85.5	85.5	84.4
Canada	1.0	2.2	1.3	2.8	1.9	1.9	2.2	1.3	1.4	2.1	2.8	2.3
Other	[3]	[3]	[3]	—	—	[3]	[3]	—	[3]	[3]	—	[3]
LATIN AMERICAN	*1.0*	*1.5*	*3.1*	*4.2*	*5.5*	*7.9*	*8.8*	*7.8*	*1.6*	*0.9*	*0.7*	*0.9*
EUROPE	*29.0*	*13.6*	*7.4*	*5.4*	*4.3*	*3.0*	*4.9*	*6.6*	*7.8*	*9.1*	*8.0*	*10.4*
Italy	2.2	1.7	0.7	[3]	[3]	[3]	[3]	0.2	0.3	1.3	0.5	0.8
Germany	12.8	1.3	0.2	[3]	[3]	[3]	[3]	[3]	[3]	0.1	0.4	1.4
Belgium	1.7	0.7	[3]	[3]	—	—	[3]	0.2	0.4	0.4	0.5	0.8
France	3.3	1.9	[3]	[3]	[3]	[3]	[3]	0.4	0.8	0.4	0.6	0.1
Great Britain	2.4	2.4	3.4	3.7	2.1	1.3	1.5	1.9	2.0	2.9	2.2	2.3
Netherlands	1.0	0.4	[3]	[3]	—	[3]	[3]	0.1	0.3	0.3	0.3	0.4
Sweden	2.0	1.3	0.8	0.1	[3]	[3]	1.1	1.6	1.4	1.5	1.1	1.4
Switzerland	1.2	1.5	1.0	1.1	1.2	0.6	1.1	1.0	1.2	1.2	1.4	1.0
Other	2.6	2.4	1.4	0.6	0.9	1.0	1.2	1.3	1.3	1.0	1.0	2.2
ASIA	*2.1*	*3.0*	*3.2*	*0.3*	[3]	[3]	[3]	*0.1*	*0.4*	*0.8*	*0.7*	*1.0*
AFRICA	*0.3*	*0.2*	*0.1*	[3]	*0.1*	[3]	*0.1*	*0.1*	[3]	[3]	*0.1*	*0.1*
OCEANIA	*0.5*	*0.6*	*0.6*	*0.4*	*0.3*	*1.7*	*1.5*	*0.6*	*0.4*	*0.2*	*0.6*	*0.9*

Source: Bank of Mexico, Departamento de Estudios Económicos.

NOTE: Items may not add up to totals because of rounding or conversion.

[1] Unadjusted total merchandise imports of the Dirección General de Estadística.

[2] Less than $50,000.

[3] Less than one-tenth of one percent.

TABLE 144

FOREIGN TRADE

Geographic Distribution of Exports, 1939-1950

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
							(Millions of dollars)					
TOTAL EXPORTS[1]	*106.9*	*107.6*	*105.6*	*137.6*	*211.6*	*203.2*	*241.0*	*287.7*	*375.0*	*427.5*	*369.8*	*427.3*
NORTH AMERICA	*62.9*	*89.7*	*92.5*	*120.6*	*184.7*	*173.1*	*205.4*	*239.3*	*304.4*	*310.7*	*295.7*	*369.4*
United States[2]	62.9	89.6	92.4	120.2	183.9	172.3	203.6	237.8	304.0	309.7	292.8	365.4
Canada	[3]	0.1	0.1	0.4	0.7	0.7	1.8	1.5	0.4	1.1	2.8	4.0
Other	[3]	[3]	[3]	—	—	[3]	0.1	—	[3]	—	0.1	[3]
LATIN AMERICA	*2.5*	*3.2*	*7.7*	*16.8*	*24.8*	*26.5*	*33.5*	*35.5*	*35.0*	*35.4*	*21.8*	*24.7*
EUROPE	*39.3*	*9.6*	*0.9*	*0.2*	*0.7*	*1.1*	*1.5*	*10.7*	*30.2*	*64.0*	*41.0*	*26.3*
Italy	3.1	4.0	[3]	—	—	—	[3]	0.1	0.4	2.7	1.7	2.0
Germany	9.7	0.1	[3]	—	[3]	[3]	—	[3]	[3]	1.3	2.0	1.6
Belgium	4.2	0.2	[3]	—	—	[3]	[3]	1.8	4.1	9.8	7.1	4.2
France	2.6	1.5	[3]	[3]	[3]	[3]	0.1	1.4	3.5	9.2	6.8	2.9
Great Britain	9.5	1.7	0.2	[3]	[3]	[3]	0.2	1.8	6.7	13.5	8.8	4.2
Netherlands	2.6	0.3	—	—	—	—	0.1	0.9	5.0	7.2	4.4	5.2
Sweden	2.8	0.8	[3]	[3]	0.5	0.9	0.8	3.1	4.8	1.8	0.6	1.5
Switzerland	0.1	[3]	0.1	[3]	[3]	[3]	[3]	0.1	0.3	[3]	0.5	0.1
Other	4.8	0.9	0.6	0.1	0.2	0.2	0.2	1.6	5.4	18.5	9.2	4.8
ASIA	*2.1*	*5.4*	*4.5*	[3]	[3]	[3]	*0.1*	*1.2*	*3.6*	*6.6*	*4.1*	*5.9*
AFRICA	[3]	*0.1*	[3]	—	*1.4*	*2.4*	*0.5*	*1.0*	*1.5*	*3.3*	*2.4*	*0.9*
OCEANIA	0.1	0.2	0.1	[3]	[3]	[3]	[3]	[3]	0.3	0.1	[3]	0.1

(Percent of total exports)

TOTAL	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
NORTH AMERICA	*58.8*	*83.4*	*87.6*	*87.6*	*87.3*	*85.2*	*85.2*	*83.2*	*81.2*	*72.7*	*80.0*	*86.5*
United States	58.8	83.3	87.5	87.4	86.9	84.8	84.5	82.7	81.1	72.4	79.2	85.5
Canada	[4]	0.1	0.1	0.3	0.3	0.3	0.8	0.5	0.1	0.3	0.8	0.9
Other	[4]	[4]	[4]	—	—	[4]	[4]	—	[4]	—	[4]	[4]
LATIN AMERICA	*2.3*	*3.0*	*7.3*	*12.2*	*11.7*	*13.0*	*13.9*	*12.3*	*9.3*	*8.3*	*5.9*	*5.8*
EUROPE	*36.8*	*8.9*	*0.9*	*0.1*	*0.3*	*0.5*	*0.6*	*3.7*	*8.1*	*15.0*	*11.1*	*6.2*
Italy	2.9	3.7	[4]	—	—	[4]	[4]	[4]	0.1	0.6	0.5	0.5
Germany	9.1	0.1	[4]	—	[4]	[4]	—	[4]	[4]	0.3	0.5	0.4
Belgium	3.9	0.2	[4]	—	—	[4]	[4]	0.6	1.1	2.3	1.9	1.0
France	2.4	1.4	[4]	[4]	[4]	[4]	[4]	0.5	1.0	2.2	1.8	0.7
Great Britain	8.9	1.6	0.2	[4]	—	[4]	0.1	0.6	1.8	3.2	2.4	1.0
Netherlands	2.4	0.3	—	—	[4]	—	[4]	0.3	1.3	1.7	1.2	1.2
Sweden	2.6	0.7	[4]	[4]	0.2	0.4	0.3	1.1	1.3	0.4	0.2	0.4
Switzerland	0.1	[4]	0.1	[4]	[4]	[4]	[4]	[4]	0.1	[4]	0.1	[4]
Other	4.5	0.8	0.6	0.1	0.1	0.1	0.1	0.6	1.4	4.3	2.5	1.1
ASIA	*2.0*	*5.0*	*4.3*	[4]	[4]	[4]	[4]	*0.4*	*1.0*	*1.5*	*1.1*	*1.4*
AFRICA	[4]	*0.1*	[4]	—	*0.7*	*1.2*	*0.2*	*0.4*	*0.4*	*0.8*	*0.7*	*0.2*
OCEANIA	*0.1*	*0.2*	*0.1*	[4]	[4]	[4]	[4]	[4]	0.1	[4]	[4]	[4]

Source: Bank of Mexico, Departamento de Estudios Económicos.

NOTE: Items may not add up to totals because of rounding or conversion.

[1] These totals were obtained by the Bank of Mexico by deducting from the unadjusted general exports of the Dirección General de Estadística: (1) gold, silver and other metal coins, gold sheets and specially minted gold coins, banknotes and securities, and (2) gold and silver exports as reported by Estadística Minerometalúrgica of the Ministry of Finance and Public Credit, and adding to the industrial metals export group the difference between the value for precious metals reported by Estadística Minerometalúrgica and the value reported by the Dirección General de Estadística.

[2] Mexican custom statistics exaggerate exports to the U. S. by including shipments intransit through the U. S. to Canada and other countries. In its Balance of Payments Yearbook for 1938, 1946 and 1947, the International Monetary Fund estimated, on the basis of Mexican revalued exports then available, that intransit shipments through the U. S. to other countries amounted to $63.2 million in 1946 and $100.1 million in 1947, or 19.4% and 26%, respectively, of total exports to the U. S. On the basis of the latest revaluation of exports by the Bank of Mexico, the Combined Mexican Working Party reestimated the probable extent of trans-shipment through the U. S. using the same method followed by the Fund. According to these estimates, trans-shipments in 1946 amounted to only $1.8 million and in 1947 to $63.0 million.

[3] Less than $50,000.

[4] Less than one-tenth of one percent.

TABLE 145

RATIO OF CAPITAL GOODS IMPORTS TO GROSS INVESTMENT 1945-1950

Year (1)	Gross Investment (millions of pesos) (2)	Imports of Capital Goods (millions of pesos) (3)	Ratio Capital Goods Imports to Gross Investment (4) (3/2)
1945	2.276	550	24.2
1946	3.261	975	29.9
1947	4.104	1.254	30.6
1948	4.552	1.426	31.3
1949	5.117	1.653	32.3
1950	5.937	2.100	35.4
	Average ratio for 1946-1950		31.9

Source: Gross investment, Combined Mexican Working Party; Imports of Capital Goods, Bank of Mexico compilation of customs data of Dirección General de Estadística, corrected for under valuation by Combined Mexican WorkingParty on the basis of data of the Bank of Mexico.

TABLE 146

FOREIGN TRADE

Index of Mexico's Terms of Trade with the United States, 1939-1950

1939 = 100

Year	Export Prices Index[1] (1)	Import Prices Index[2] (2)	Terms of Trade Index (3) (1)/(2)
1939	100.0	100.0	100.0
1940	106.9	107.6	99.4
1941	114.7	114.5	100.2
1942	133.8	136.5	98.0
1943	147.7	147.6	100.1
1944	157.5	165.9	94.9
1945	161.5	163.9	98.5
1946	174.5	153.9	113.4
1947	212.9	187.3	113.7
1948	238.3	198.6	120.0
1949	230.4	183.8	125.4
1950	271.1	178.9	151.5

Source: Combined Mexican Working Party. Computationss based on data of the U. S. Department of Commerce, Bank of Mexico's corrected export data of the Dirección General de Estadística and customs data on imports of the Dirección General de Estadística.

[1] Based on three component classes of U. S. unit price import index of the U. S. Department of Commerce. The component indices were weighted by the 1950 value of the corresponding Mexican exports as corrected by the Bank of Mexico.

[2] Based on three component classes of U. S. unit price export index of the U. S. Department of Commerce, weighted by the 1950 value of the corresponding Mexican imports as compiled by the Dirección General de Estadística.

TABLE 147

Number of Tourists and Tourist Receipts, *1939-1950*

	TOURISTS		MILLIONS OF DOLLARS					
Year	Number[1] (1)	Index 1939=100 (2)	Net Expenditures of Border Visitors (3)	Tourist Expenditures (4)	Total Tourist Receipts (5)	Mexican Travel Expenditures Abroad (6)	Net Tourist Receipts[2] (7)	Receipts per Tourist[3] (Dls.) (8)
1939	139,010	100.0	12.0	18.7	30.7	9.0	21.7	221
1940	133,209	95.8	13.0	17.3	30.3	8.0	22.3	228
1941	173,104	124.5	11.0	26.5	37.5	6.0	31.5	217
1942	97,785	70.3	13.0	16.4	29.4	6.0	23.4	301
1943	133,572	96.1	13.8	27.5	41.3	6.0	35.3	309
1944	126,208	90.8	16.3	32.2	48.5	6.0	42.5	384
1945	164,782	118.5	15.0	45.9	60.9	10.0	50.9	370
1946	265,234	190.8	15.6	85.6	101.2	13.9	87.3	382
1947	249,591	179.6	15.6	81.3	96.9	14.1	82.8	388
1948	264,904	190.6	28.5	87.7	116.2	12.1	104.1	439
1949	322,504	232.0	37.2	100.4	137.6	5.3	132.3	427
1950	390,097	280.6	45.4	117.0	162.4	6.3	156.1	416

Source: Bank of Mexico, Departamento de Estudios Económicos.

[1] Does not include border visitors.

[2] Includes net receipts from border visitors and gross receipts from tourists coming into the interior.

[3] Obtained by dividing total tourist receipts (column 5) by number of tourists (column 1).

TABLE 148

U. S. NATIONAL INCOME AND MEXICAN TOURISM, *1939-1950*

Year	U.S. National Income Billions of Dollars	Index (1939=100)	% Annual Increase	Mexican Tourism Receipts[1] Millions of Dollars	Index (1939=100)	% Annual Increase
1939	72.5	100.0	7.6	30.7	100.0	5.1
1940	81.3	112.1	12.1	30.3	98.7	—1.3
1941	103.8	143.2	27.7	37.5	122.2	23.8
1942	137.1	189.1	32.1	29.4	95.8	—21.6
1943	169.7	234.1	23.8	41.3	134.5	40.5
1944	183.8	253.5	8.3	48.5	158.0	17.4
1945	182.7	252.0	—0.6	60.9	198.4	25.6
1946	180.3	248.7	—1.3	101.2	329.6	66.2
1947	198.7	274.1	10.2	96.9	315.6	—4.2
1948	223.5	308.3	12.5	116.2	378.5	19.9
1949	216.8	299.0	—3.0	137.6	448.2	18.4
1950	239.0	329.7	10.2	162.5	529.3	18.1

Source: U. S. national income, U. S. Department of Commerce; Mexican tourism receipts, Bank of Mexico, Departamento de Estudios Económicos.

[1] Includes net receipts from border visitors and gross receipts of visitors from abroad to the interior.

TABLE 149

NUMBER AND REMITTANCES OF MIGRANT WORKERS (BRACEROS) IN THE UNITED STATES, *1943-1950*

	No. Mexican Migrant Workers[1]	Remittances of Mexican Workers in U.S. (millions of dollars)
1943	32,278[2]	36.3
1944	63,432[2]	50.4
1945	61,687[2]	55.1
1946	41,044	34.0
1947	86,331[3]	29.2
1948	37,331[4]	21.6
1949	100,476[5]	17.6
1950	90,005	19.4

Source: Number of migrant workers, "Migratory Labor in American Agriculture," Report of the President's Commission on Migratory Labor 1951; personal remittances, Bank of Mexico, Departamento de Estudios Económicos.

[1] Includes contractual workers only; excludes workers who entered the United States illegally (wetbacks).

[2] Does not include 140,000 Mexican railroad workers who were in the United States from 1943 through 1945 on a contractual basis.

[3] Includes 55,000 wetbacks legalized in 1947.

[4] Does not include wetbacks "paroled" to farm employers.

[5] Includes 87,220 wetbacks legalized in 1949.

TABLE 150

SERVICE ON FOREIGN INVESTMENTS AND LOANS, *1939-1950*

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
						(Millions of dollars)						
I. *Public debt service*	*1.6*	*2.2*	*4.7*	*6.1*	*21.9*	*11.9*	*9.1*	*16.7*	*22.5*	*29.2*	*35.0*	*37.2*
A. Interest on official debt	[1]	[1]	[1]	0.2	2.9	1.5	1.1	1.6	2.8	5.6	10.1	9.2
B. Amortization of official debt	1.6	2.2	4.7	5.9	19.0	10.4	8.0	15.1	19.7	23.6	24.9	28.0
II. *Private investment service*	*19.5*	*30.1*	*39.4*	*33.8*	*47.9*	*43.9*	*48.5*	*58.4*	*92.7*	*77.1*	*79.7*	*51.3*[2]
A. Interest and dividends	16.1	27.7	33.2	28.8	38.5	30.8	35.5	42.3	72.3	62.5	66.9	51.3
B. Earnings not transferred (reinvested earnings)	3.4	2.4	6.2	5.0	9.4	13.1	13.0	16.1	20.4	14.6	12.8	*
III. *Potential transfer burden* (I and II)	*21.1*	*32.3*	*44.1*	*39.9*	*69.8*	*55.8*	*57.6*	*75.1*	*115.2*	*106.3*	*114.7*	*88.5*[2]
IV. *Interest charges*[3] (IA and IIA)	16.1	27.7	33.2	29.0	41.4	32.3	36.6	43.9	75.1	68.1	77.0	60.5
V. *Current international receipts*	193.0	183.7	192.7	232.5	328.2	350.8	411.7	482.3	604.2	602.1	592.9	715.7
						(Percentages)						
VI. *Ratio: Potential transfer burden to current international receipts* (III/V)	10.9	17.6	22.9	17.2	21.3	15.9	14.0	15.6	19.1	17.7	19.3	12.4[2]
VII. *Ratio: Interest charges to current international receipts* (IV/V)	8.3	15.1	17.2	12.5	12.6	9.2	8.9	9.1	12.4	11.3	13.0	8.5

Source: Bank of Mexico, Departamento de Estudios Económicos, and International Monetary Fund.

*Not available.

[1] Less than $50,000.00.

[2] These figures would be higher if reinvested profits for 1950, which were unavailable, had been included.

[3] Includes dividends.

TABLE 151

External Public Debt of Mexico on June 30, 1951
Federal Government and Guaranteed Debt
(In thousands)

	Original par values			Debt outstanding 6/30/51	
	In original currencies	Converted to U.S. dollars[1]	New par value under debt plans	Old par value	New par value
BONDED DEBT					
Government bonds under 1942 Agreement					
Dollar bonds	$ 58,915	58,915			
Sterling bonds	£ 30,094	142,935			
Peso bonds	Peso 139,594	28,782			
Total Government bonds under 1942 agreement		*230,632*	*$ 47,553*	*$210,632*	*43,429*
(Excluding enemy-owned bonds)[2]		(188,092)	(38,782)	(168,092)	(34,658)
Obligations representing interest—Class A & B					
Dollars	$ 77,675	77,675			
Sterling	£ 1,189	4,792			
Pesos	Peso 55,294	11,401			
		93,868	157		
Obligations representing interest 1923-1942					
Dollars	$ 147,149	147,149			
Sterling	£ 3,355	13,521			
Pesos	Peso 118,083	24,347			
		185,017	1,850		
Total interest obligations		*278,885*	*2,007*	—	—
Total government bonds and interest obligations under 1942 agreement		**509,517**	**49,560**	**210,632**	**43,429**
Railway bonds under 1946 agreement					
Dollar bonds	$ 211,415	211,415			
Sterling bonds	£ 5,384	21,697			
Reichsmarks[3]	Rm 8,669	3,468			
Total railway bonds under 1946 agreement		*236,580*	*48,064*	*221,667*	*44,989*
(Excluding enemy-owned)[2]		(218,460)	(44,328)	(203,547)	(41,253)
Obligations representing interest—Class A & B[4]					
Dollars	$ 82,131	82,131			
Sterling	£ 2,593	10,451			
Total		92,582	*126*		
Obligations representing interest 1923-1942					
Dollars	$ 205,348	205,348			
Sterling	£ 6,591	26,562			
Total		231,910	2,319		
		324,492	*2,445*	—	—
Total railway bonds and interest obligations under 1946 agreement		*561,072*	*50,509*	*221,667*	*44,989*
Total bonded debt		**1,070,589**	**$100,069**	**$432,299**	**88,418**

	Debt outstanding 6/30/51	
	In currency of payment	Expressed in U.S. dollars
EXPORT-IMPORT BANK LOANS		
Outstanding (Nacional Financiera, S.A., 3½, 4 & 4½%, various maturities)	$ 74,083	74,083
Undisbursed	$ 159,969	159,969
Total Export-Import Bank loans[5]	$ *234,052*	*234,052*
I.B.R.D. LOANS		
Nacional Financiera, S.A. and Comision Federal de Electricidad 4½%, 1949-1973—outstanding	$ 11,950	11,950
	Can$ 19	18
	Sw fr 864	201
undisbursed		11,931
		24,100
Mexican Light & Power Co. 4½%, 1950-1975—outstanding	$ 10,685	10,685
	Bfr 346	7
	Can$ 269	249
	fr 7,000	20
	Lir 61,672	99
	Sw fr 275	64
—undisbursed		14,876
		26,000
Consortium of 8 Mexican Banks and Nacional Financiera, S.A., 3½%, various maturities—undisbursed		10,000
Summary of I.B.R.D. loans—outstanding	$ 22,635	22,635
	Can$ 288	267
	Sw fr 1,139	265
	Bfr 346	7
	fr 7,000	20
	Lir 61,672	99
—total outstanding		*23,293*
—undisbursed		36,807
Total I.B.R.D. loans[6]		**60,100**
PRIVATE BANK LOANS		
Bank of American loans		
Carretera Transistmica 5%, 1949-1951	$ 1,000	1,000
Highway loan 5%, 1950-1954—outstanding	$ 15,000	15,000
Nacional Financiera 1949-1952[7]	$ 206	206
Banco de Comercio, S.A. 1949-1952[7]	$ 305	305
Chase National Bank of N.Y. 3½%, 1950-1953	$ 1,667	1,667
First National Bank of Chicago 5%, 1950-1952	$ 2,000	2,000
Republic National Bank of Dallas 5%, 1950-1953	$ 608	608
Mercantile Commerce Bank & Trust Co., St. Louis 5%, 1950-1953	$ 709	709
Total private bank loans[8]		*21,495*
LOANS FROM PRIVATE COMPANIES		
Westinghouse Electric International Co. 3%, 1948-1959	$ 3,264	3,264
International General Electric 3%, 1947-1953	$ 361	361
Total loans from private companies		*3,625*
OIL, AGRARIAN AND OTHER SETTLEMENTS		
Mexico Petroleum Asphalt Co.	$ 400	400
Mexican-American agrarian claims	$ 11,500	11,500
Anglo-Dutch Oil Settlement, 1962	$ 86,493	86,493
Italian claims[9]	Lir 172	20
Total oil, agrarian and other settlements		*98,413*
MISCELLANEOUS		
Mexican Embassy Building in Buenos Aires	Arg.$ 167[10]	57
Total debt[11]		**506,160**[12]
Total undisbursed		**196,776**
Total debt outstanding		**309,384**

Source: Prepared by International Bank for Reconstruction and Development (Economic Department) based on information of Nacional Financiera, the Bank of Mexico, the International Bank for Reconstruction and Development and the Export-Import Bank.

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[1] Converted at the rates specified in the debt adjustment plan as follows: £1=$4.03; $1=4.85 pesos.

[2] Enemy-owned bonds are not eligible to participate in the settlement plan.

[3] This debt consists of the following items:

National Railways of Mexico 6% Secured Gold Notes, Series C dated June 1, 1914	Rm 252,508
National Railways of Mexico 6% Secured Notes, 2 year, due June 1, 1915	Rm 8,416,938
	Rm 8,669,446

These bonds are still payable in theory. However, they were considered valueless by the Supreme Court of New York at the time that the debt adjustment plan was consumated. The bonds are held partly in Germany and partly in Mexico. If these Reichsmarks bonds are excluded the amount outstanding at the time the plan went into effect was as follows:

	Old par value	*New par value*
Total bonds	$ 236,580,163	$ 48,064,409
Reichsmarks bonds	3,467,778	0
Total bonds under plan	$ 233,112,385	$ 48,064,409
Enemy-owned bonds	18,120,149	3,736,000
Net	$ 214,992,236*	$ 44,328,409

*This amount is actually equivalent to the $218,460,000 shown on page 1 of the table since the Reichsmarks bonds are valueless.

[4] It is not known whether there were any interest obligations for the bonds in Reichsmarks.

[5] The following loans listed by the Export-Import Bank to private companies in Mexico are not included:

	Disbursed and still outstanding	*Undisbursed*
Cia Fundidora de F.y.A. de Monterrey, S.A.	$437,500	—
Fred Leighton, Inc.	76,998	3,000
Mexican Gulf Sulphur Co. and Mexican Sulphur Co.	—	1,875,000

[6] In January 1952, the IBRD extended a loan of $29,700,000 to the Nacional Financiera S.A. & Comision Federal de Electricidad (4½%, January 11, 1952-1977).

[7] The proceeds of the Bank of America loans to Banco de Comercio (guaranteed by Nacional Financiera) and to Nacional Financiera were reloaned to the Mexican Government for the Ferrocarril del Sureste.

[8] There is also a loan of $1,950,000 to the Comision Federal de Electricidad by the Chemical Bank & Trust Co. bearing interest at 4½%, and a commission of ¼%; repayable in five equal installments in 1952 and guaranteed by Nacional Financiera. This loan has been excluded because it is expected to be replaced later by loans already authorized by the Export-Import Bank shown elsewhere in the Table.

[9] Payments suspended during World War II.

[10] Argentine pesos.

[11] In the latter half of 1951 the Mexican Government purchased the properties of the Southern Pacific Railroad in Mexico for $12,000,000. Of this amount $3,000,000 was paid in cash and $9,000,000 in bonds, bearing 3½% and maturing over a period of fifteen years. The bonds were given to Southern Pacific Railroad to be placed abroad. None of the bonds may be sold in Mexico. These bonds are not included in the table.

[12] Summary of total debt by currencies.

Currency	*Currency of payment*	*Expressed in U.S. dollars*	%
U. S. dollars	$ 505,425	505,425	99.85
Canadian dollars	Can$ 288	267	.05
Swiss francs	Sw fr 1,139	265	.04
Italian lire	Lir 61,844	119	.02
Argentine pesos	Arg.$ 167	57	.01
French francs	fr 7,000	20	—
Belgian francs	Bfr 346	7	—
Total		506,160	100.0

TABLE 152

ESTIMATED CONTRACTUAL INTEREST AND AMORTIZATION PAYMENTS ON THE EXTERNAL PUBLIC DEBT OF MEXICO

(Expressed in thousands of U. S. dollars)

	Government bonds under 1942 agreement[2]				Railway bonds under 1946 agreement[2]				Total bonds under 1942 and 1946 agreements			
		Payments during year				Payments during year				Payments during year		
Year	Debt outstanding Jan. 1	Amortization	Interest	Total	Debt outstanding Jan. 1	Amortization	Interest	Total	Debt outstanding Jan. 1	Amortization	Interest	Total
1952	43,429[1]	1,031	1,827	2,858	44,989[1]	2,078	3,819	5,897	88,418[1]	3,109	5,646	8,755
1953	42,399	1,031	1,771	2,802	42,328	2,263	3,634	5,897	84,727	3,294	5,405	8,699
1954	41,368	1,031	1,716	2,747	40,065	1,206	1,743	2,948	81,433	2,237	3,459	5,696
1955	40,337	1,031	1,660	2,691	38,859	1,258	1,690	2,948	79,196	2,289	3,350	5,639
1956	39,306	1,031	1,604	2,635	37,601	1,313	1,636	2,948	76,907	2,344	3,240	5,584
1957	38,275	1,031	1,549	2,580	36,288	1,370	1,578	2,948	74,563	2,401	3,127	5,528
1958	37,244	1,031	1,493	2,524	34,918	1,430	1,519	2,948	72,162	2,461	3,012	5,473
1959	36,213	1,031	1,437	2,468	33,488	1,492	1,457	2,948	69,701	2,523	2,894	5,417
1960	35,182	1,031	1,381	2,412	31,996	1,557	1,392	2,948	67,178	2,588	2,773	5,361
1961	34,151	1,031	1,326	2,357	30,439	1,624	1,324	2,948	64,590	2,655	2,650	5,305
1962	33,120	1,031	1,270	2,301	28,815	1,695	1,253	2,948	61,935	2,726	2,523	5,249
1963	32,089	10,944	587	11,531	27,120	1,769	1,180	2,948	59,209	12,713	1,767	14,480
1964	21,145	4,229	470	4,699	25,351	1,846	1,103	2,948	46,496	6,075	1,573	7,648
1965	16,916	4,229	352	4,581	23,505	1,926	1,022	2,948	40,421	6,155	1,374	7,529
1966	12,687	4,229	235	4,464	21,579	2,010	939	2,948	34,266	6,239	1,174	7,413
1967	8,458	4,229	117	4,346	19,569	2,097	851	2,948	28,027	6,326	968	7,294
1968	4,229	4,229	—	4,229	17,472	2,189	760	2,948	21,701	6,418	760	7,178
1969					15,283	2,284	665	2,948	15,283	2,284	665	2,948
1970					12,999	2,383	565	2,948	12,999	2,383	565	2,948
1971					10,616	2,487	462	2,948	10,616	2,487	462	2,948
1972					8,129	2,595	354	2,948	8,129	2,595	354	2,948
1973					5,534	2,708	241	2,948	5,534	2,708	241	2,948
1974					2,826	2,826	123	2,948	2,826	2,826	123	2,948
1975												
1976												

TABLE 152—(Continued)

	Bonds of Southern Pacific Railroad[3]				Total bonds				Private bank loans			
	Debt outstanding	Payments during year			Debt outstanding	Payments during year			Debt outstanding	Payments during year		
Year	Jan. 1	Amortization	Interest	Total	Jan. 1	Amortization	Interest	Total	Jan. 1	Amortization	Interest	Total
1952	—[1]	—	—	—	88,418[1]	3,109	5,646	8,755	21,495[1]	11,213	673	11,886
1953	9,000	600	315	915	93,727	3,894	5,720	9,614	8,694	4,944	257	5,201
1954	8,400	600	294	894	89,833	2,837	3,753	6,590	3,750	3,750	81	3,831
1955	7,800	600	273	873	86,996	2,889	3,623	6,512				
1956	7,200	600	252	852	84,107	2,944	3,492	6,436				
1957	6,600	600	231	831	81,163	3,001	3,358	6,359				
1958	6,000	600	210	810	78,162	3,061	3,222	6,283				
1959	5,400	600	189	789	75,101	3,123	3,083	6,206				
1960	4,800	600	168	768	71,978	3,188	2,941	6,129				
1961	4,200	600	147	747	68,790	3,255	2,797	6,052				
1962	3,600	600	126	726	65,535	3,326	2,649	5,975				
1963	3,000	600	105	705	62,209	13,313	1,872	15,185				
1964	2,400	600	84	684	48,896	6,675	1,657	8,332				
1965	1,800	600	63	663	42,221	6,755	1,437	8,192				
1966	1,200	600	42	642	35,466	6,839	1,216	8,055				
1967	600	600	21	621	28,627	6,926	989	7,915				
1968					21,701	6,418	760	7,178				
1969					15,283	2,284	665	2,948				
1970					12,999	2,383	565	2,948				
1971					10,616	2,487	462	2,948				
1972					8,129	2,595	354	2,948				
1973					5,534	2,708	241	2,948				
1974					2,826	2,826	123	2,948				
1975												
1976												

	Loans from private companies				Oil, agrarian and other settlements[4]				Total I.B.R.D. loans[5]			
	Debt outstanding	Payments during year			Debt outstanding	Payments during year			Debt outstanding	Payments during year		
Year	Jan. 1	Amortization	Interest	Total	Jan. 1	Amortization	Interest	Total	Jan. 1	Amortization	Interest	Total
1952	3,625[1]	741	100	841	98,393[1]	8,977	2,434	11,411	60,100[1]	—	3,186	3,186
1953	2,883	490	83	573	80,821	9,165	2,252	11,417	89,800	3,145	3,932	7,077
1954	2,393	435	69	504	71,656	9,159	2,030	11,189	86,655	3,549	3,801	7,350
1955	1,958	435	55	490	62,496	8,359	1,830	10,189	83,106	3,827	3,661	7,488
1956	1,523	435	43	478	54,137	7,065	1,624	8,689	79,279	4,323	3,503	7,826
1957	1,088	435	29	464	47,071	7,277	1,412	8,689	74,956	4,624	3,324	7,948
1958	653	435	16	451	39,794	7,495	1,194	8,689	70,332	2,735	3,134	5,869
1959	218	218	3	221	32,299	7,720	969	8,689	67,597	2,850	3,011	5,861
1960					24,575	7,952	737	8,689	64,747	2,969	2,880	5,849
1961					16,627	8,190	499	8,689	61,778	3,093	2,745	5,838
1962					8,436	8,436	253	8,689	58,685	3,225	2,605	5,830
1963									55,460	3,360	2,458	5,818
1964									52,100	3,499	2,306	5,805
1965									48,601	3,649	2,146	5,795
1966									44,952	3,803	1,980	5,783
1967									41,149	3,962	1,809	5,771
1968									37,187	4,131	1,628	5,759
1969									33,056	4,303	1,440	5,743
1970									28,753	4,484	1,244	5,728
1971									24,269	4,677	1,040	5,717
1972									19,592	4,873	826	5,699
1973									14,719	5,080	606	5,686
1974									9,639	3,649	392	4,041
1975									5,990	2,879	227	3,106
1976									3,111	2,051	117	2,168

TABLE 152—(Continued)

	Export-Import Bank loans[6]				Total debt[7]				Service payments by currencies[7]			
	Debt outstanding Jan. 1	Payments during year			Debt outstanding Jan. 1	Payments during year						
Year		Amortization	Interest	Total		Amortization	Interest	Total	U. S. dollars	Canadian dollars	Swiss franks	Italian lira
1952	204,352[1]	10,029	4,169	14,198	476,383[1]	34,069	16,208	50,277	50,202	40	31	4
1953	185,736	8,942	4,875	13,817	461,662	30,581	17,118	47,699	47,583	63	48	5
1954	176,794	15,251	5,866	21,117	431,081	34,982	15,599	50,581	50,456	67	51	7
1955	161,543	17,506	5,711	23,217	396,099	33,017	14,879	47,896	47,771	67	51	7
1956	144,039	18,820	5,043	23,863	363,085	33,587	13,705	47,292	47,168	66	51	7
1957	125,219	15,862	4,360	20,222	329,498	31,199	12,483	43,682	43,558	66	51	7
1958	109,357	14,653	3,780	18,433	298,299	28,379	11,346	39,725	39,602	66	50	7
1959	94,705	14,268	3,266	17,534	269,919	28,178	10,333	38,511	38,388	66	50	7
1960	80,437	14,250	2,758	17,008	241,741	28,361	9,314	37,675	37,553	65	50	7
1961	66,186	12,514	2,269	14,783	213,381	27,052	8,310	35,362	35,240	65	50	7
1962	53,672	12,171	1,824	13,995	186,328	27,158	7,331	34,489	34,367	65	50	7
1963	41,501	12,615	1,387	14,002	159,171	29,289	5,717	35,006	34,881	65	50	7
1964	28,886	5,841	993	6,834	129,884	16,015	4,956	20,971	20,850	65	49	7
1965	23,045	5,581	786	6,367	113,867	15,984	4,369	20,353	20,233	64	49	7
1966	17,464	4,009	586	4,595	97,883	14,652	3,780	18,432	18,312	64	49	7
1967	13,455	2,265	468	2,733	83,231	13,155	3,265	16,420	16,310	64	49	7
1968	11,190	1,890	388	2,278	70,077	12,437	2,777	15,214	15,096	63	48	7
1969	9,300	1,490	325	1,815	57,640	8,077	2,430	10,507	10,389	63	48	7
1970	7,810	1,440	272	1,712	49,563	8,307	2,082	10,389	10,271	63	48	7
1971	6,368	1,415	223	1,638	41,253	8,578	1,726	10,304	10,187	62	48	7
1972	4,953	1,415	173	1,588	32,674	8,883	1,353	10,236	10,120	62	47	7
1973	3,538	1,415	124	1,539	23,791	9,202	972	10,174	10,059	61	47	7
1974	2,123	1,415	74	1,489	14,588	7,890	589	8,479	8,434	21	17	7
1975	707	707	12	719	6,697	3,585	238	3,823	3,802	10	8	3
1976	—	—	—	—	3,111	2,051	117	2,168	2,168	—	—	—

Source: Prepared by International Bank for Reconstruction and Development (Economic Department), based on information furnished by Nacional Financiera, Bank of Mexico, International Bank for Reconstruction and Development and the Export-Import Bank.

NOTE: Items may not add up to totals because of rounding.

[1] These amounts are as of June 30, 1951. The 1952 amortizations subtracted from the 1952 outstanding debt amounts do not yield the 1953 outstanding debt amounts since repayments and new authorizations in the second six months of 1951 have also been taken into account.

[2] The schedule includes enemy-owned bonds and is based on the assumption that bonds will be retired at par; in actuality, it is probable that government bonds will be purchased by the Mexican Government in the open market below par, in which case overall retirement costs will be lower than those shown; if railway bonds are purchased below par they could be retired at dates earlier than those shown.

[3] The amortization schedule for these bonds is estimated on the basis of reports published in the press and from other information.

[4] Excludes Italian claims equivalent to $20,000.

[5] Includes the $29,700,000 loaned to the Nacional Financiera S. A. and the Comision Federal de Electricidad in January 1952.

[6] Of the undisbursed portion of Export-Import Bank loans, $29,700,000 is excluded, since it is understood that Mexico does not expect to utilize this amount.

[7] Excludes Italian claims equivalent to $20,000 and obligations on the Mexican Embassy building in Buenos Aires equivalent to $57,000.

TABLE 153

FOREIGN INVESTMENT SERVICE RATIOS FOR SELECTED UNDERDEVELOPED COUNTRIES IN 1948 AND 1949[1]

Investment Income Payments as Per Cent of Current Receipts

	1948	1949
Bolivia	23.1	17.7
Brazil	8.5	8.6
Chile	19.1	17.1
Costa Rica	18.6	22.4
Cuba	9.3	4.8
Dominican Republic	17.8	16.0
Guatemala	17.3	—
Honduras	21.6	—
Nicaragua	15.0	16.7
Surinam	—	10.5
Venezuela	38.8	26.0
Belgian Congo	8.2	—
Northern Rhodesia	42.5	34.3
Southern Rhodesia	7.5	8.1
Ceylon	6.8	3.2
India	5.3	5.0
Iran	66.6	53.1
Iraq	11.1	17.7
Philippine Republic	3.9	5.0
Average: all countries	18.9	16.6

Source: David Finch, "Investment Service of Underdeveloped Countries," IMF Staff Papers, Vol. II, No. 1. September 1951, P. 84.

[1] Investment service for some of these countries may include reinvested profits.

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